IN THE UNITED STATES COURT OF FEDERAL CLAIMS

AECOM ENERGY & CONSTRUCTION, INC.,

Plaintiff,

v.

THE UNITED STATES OF AMERICA,

Defendant.

20-2016 C

Case No. _____

COMPLAINT

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INTRODUCTION

1. This action arises out of two related Contracting Officer Final Decisions ("COFDs") denying claims by AECOM Energy & Construction, Inc., formerly known as URS Energy & Construction, Inc., ("URS") for payment under a Cost Plus Incentive Fee contract to decontaminate and decommission ("D&D") the Separations Process Research Unit ("SPRU") facility, a 1950s-era nuclear experimental site located in upstate New York.

2. In performing D&D work under the contract, URS incurred hundreds of millions of dollars of costs for which the Department of Energy ("DOE") is responsible. Rather than honor its contractual commitments and abide by its obligation to pay URS these costs and fee, DOE reaped the benefits of a fully decontaminated and decommissioned nuclear site at URS's expense. In so doing, DOE breached both its express and implied contractual duties.

3. In February 2011, DOE and URS executed Modification 35 to an existing task order, pursuant to which URS undertook to decontaminate and decommission the SPRU site in only eleven months. The parties recognized that the eleven-month timetable was both aggressive and ambitious, so, in Modification 35, DOE committed to comply with explicit contractual obligations that went far beyond the duty of good faith and fair dealing implied in every contract.

4. Specifically, DOE agreed to use its "best efforts" to reduce requirements and processes, cooperate with URS, and facilitate URS's performance. Modification 35 also emphasized "performance based results/outcomes and minimize[d] 'how to' performance descriptions," and reserved to URS the right to "determin[e] the specific methods for accomplishing the work."

5. Leading up to the modification, the parties conferred extensively about the schedule and work that would be required to decontaminate and decommission the SPRU site, relying on a comprehensive Historical Site Assessment ("HSA") to provide accurate information

about the site's contamination and conditions and an Integrated Recovery Plan (which was based on the HSA) that addressed schedule, cost, and technical details for completion of the project.

6. The parties estimated that the remaining physical work on the project could be completed by the end of the year for $145 million total, or approximately $70 million for the remaining work. The parties agreed to a cost-reimbursement contract with a billing formula whereby DOE and URS would share certain costs and risks: DOE would reimburse URS for (1) allowable costs up to $105 million for work required by the Modification, (2) 50% of allowable costs between $105 million and $145 million for work required by the Modification, and (3) no allowable costs above $145 million for work required by the Modification.

7. Modification 35 provided that, "in recognition of the cost sharing provisions contained herein, the parties agree that mutual efficiencies and performance improvements are necessary to reduce the actual cost and/or improve the schedule for the work."

8. Modification 35 also put clear boundaries on URS's risks and obligations. DOE retained the risks of changes to the scope of work set forth in the Modification, differing site conditions, pre-existing conditions, and the instability of a hillside on the SPRU site, all of which were expressly carved out of the Modification's cost-sharing structure.

9. While Modification 35 provided for completion of the project within eleven months, that timeline was almost immediately set off course by changes ordered by DOE; interference with URS's "determin[ation of] the specific methods for accomplishing the work"; breaches of DOE's contractual obligations; and the realization of risks, such as hillside instability, expressly allocated to DOE under Modification 35.

10. Just two business days after the parties executed Modification 35, URS learned that additional environmental permitting requirements—previously known to DOE but not

disclosed to URS—created an insurmountable obstacle to critical path work. Then, before receipt of those permits, massive rains from a hurricane undermined the hillside that was known to be unstable, requiring more than fifteen months of stabilization work before URS could return to work on the project's critical path. Thereafter, DOE repeatedly ordered URS to perform work outside the scope of the contract, at times refusing to recognize it had ordered a change and other times recognizing it had ordered a change but nonetheless failing to reimburse URS for the resulting costs.

11. DOE not only frequently refused to accept that it retained responsibility for these changes under the express terms of the contract, it also failed to facilitate URS's work as promised. Rather than use its "best efforts" to reduce requirements, cooperate with URS, and facilitate URS's performance, DOE threw up roadblocks at every turn, piling on new and excessive requirements, micromanaging URS's performance, missing key deadlines, and authorizing non-parties to the contract to interfere with URS's performance. DOE's conduct significantly delayed project completion and increased project costs.

12. In addition, while DOE and URS had entered into the contract based on their mutual understanding that the HSA provided accurate information about the site's contamination and conditions, the site assessment proved to be fundamentally inaccurate. As a result, URS was forced to remediate significantly more, and different types of, contamination than it had reasonably expected based on the HSA.

13. In the end, DOE got what it wanted—the site was properly decontaminated and decommissioned—but URS footed the bill, expending over $300 million in unreimbursed costs. This action seeks reimbursement for the millions of dollars URS was forced to incur as a result

of risks expressly allocated to DOE under the contract, DOE-ordered changes, and DOE's breaches of its contractual obligations.

PARTIES

14. Plaintiff AECOM Energy & Construction, Inc. is an Ohio corporation with its principal place of business in Aiken, South Carolina. AECOM Energy & Construction, Inc. was formerly known as Washington Group International, Inc. and URS Energy & Construction Inc. Plaintiff is referred to as URS.

15. Defendant is the United States, acting through DOE.

16. This case is brought pursuant to Indefinite Delivery/Indefinite Quantity contract DE-AM09-05SR22414 for environmental remediation entered into on October 7, 2004 between DOE and URS; Contract No. DE-AM09-05SR22414 Task Order No. DE-AT30-07CC60014/SP16, which was executed on December 13, 2007 by DOE and URS; and Task Order No. DE-AT30-08CC60014/SP16 Modification 35, which was executed on February 4, 2011 by DOE and URS.

17. DOE and URS are collectively referred to as "the parties."

JURISDICTION

18. This action is an appeal of two final decisions rendered by a contracting officer pursuant to the Contract Disputes Act of 1978 ("CDA"), 41 U.S.C. § 7103. This Court has jurisdiction pursuant to the CDA, 41 U.S.C. § 7104(b)(1), and the Tucker Act, 28 U.S.C. § 1491(a)(1).

19. On December 30, 2019, DOE's contracting officer issued a final decision (the "2019 COFD") rejecting in full certified claims submitted by URS on December 16, 2014 (the "2014 Certified Claims") for reimbursement of a sum certain for costs incurred at the SPRU site. The 2014 Certified Claims sought reimbursement of costs URS incurred due to DOE imposing

new requirements for National Emissions Standards for Hazardous Air Pollutants ("NESHAP") pre-construction permits; DOE's orders to remediate instability of the hillside at the project site; DOE imposing changes to enclosure designs and ventilation requirements; DOE-caused delays that increased the scope of sludge disposal work; DOE's failure to timely approve URS's proposed water disposal plan; and DOE's orders to prepare two additional baselines not required by the contract. The 2014 Certified Claims also brought claims for DOE's breach of its express and implied duties to cooperate with URS and to facilitate URS's performance and DOE's breach of its implied duty to disclose vital information.

20. On September 25, 2020, DOE's contracting officer issued a final decision (the "2020 COFD") rejecting in part certified claims submitted by URS on December 6, 2019 (the "2019 Certified Claims") for reimbursement of additional costs at the SPRU site, which URS incurred after filing the 2014 Certified Claims. The 2019 Certified Claims sought reimbursement of a sum certain for costs due to scabbling in excess of what URS reasonably expected to have to perform; changes to decontamination requirements DOE imposed through its "fifth condition of approval" and related contract modifications; contamination inconsistent with the HSA, which was incorporated into Modification 35; a water leak DOE told URS had been repaired; contaminated soil in excess of the bounding condition set in Modification 35; increased backfill costs due to DOE's new requirements; and escalations in labor costs due to DOE-caused delays. The 2019 Certified Claims also updated the breach claims submitted in the 2014 Certified Claims, and asserted a claim based on the parties' mutual mistake that the HSA accurately represented the conditions at the site. The 2020 COFD awarded $416,187 on URS's claim related to the fifth condition of approval, but DOE has not reimbursed URS this amount.

21. This action is an appeal of the 2019 COFD and the 2020 COFD.

FACTUAL BACKGROUND

I. HISTORY OF THE SPRU SITE AND URS'S CONTRACT WITH DOE

A. SPRU's History As A Laboratory For Nuclear Research

22. The SPRU facility, located at the Knolls Atomic Power Laboratory ("KAPL"), contained an experimental laboratory for the U.S. government's atomic weapons program in the early 1950s. From 1950 to 1953, SPRU operated as a research facility for developing the chemical process for separating plutonium and uranium from irradiated fuel and produced highly radioactive nuclear products for shipment to other nuclear sites.

23. SPRU is composed of two main areas—a laboratory and a waste processing facility. Experiments were conducted in five concrete cells in the laboratory building, Building G2. Highly radioactive waste from these experiments was sent via a series of drains, pipes, and tunnels to the waste processing facility, Building H2. There, the radioactive waste was chemically treated and then stored in a series of tanks near Building H2 called the "Tank Farm" or "Tank Vault." Building G2 was connected to Building H2 by the G2/H2 Tunnel.

24. In September 1992, the DOE Office of Nuclear Energy (the predecessor of the Naval Reactors Laboratory Field Office ("NR") and the KAPL landlord) and DOE's Office of Environmental Management ("DOE-EM") signed an agreement to transfer SPRU to DOE-EM for decontaminating and decommissioning. Thereafter, DOE began D&D work at the site.

B. DOE Knew Of Risks Associated With Open-Air Demolition At SPRU

25. In 1999, DOE commissioned a study of potential air emissions from anticipated future remediation at the site. The resulting report (the "1999 Report") analyzed potential air emissions against the backdrop of federal air pollution requirements.

26. The 1999 Report concluded that, if the G2 and H2 buildings were removed, the potential emissions from demolition work could be high enough to require permitting under

federal law. The Report reached a similar conclusion regarding an out-of-service retention basin at the SRPU site, known as Building K5.

27. DOE decided to keep the 1999 Report "internal to KAPL and . . . not widely distributed." URS was not provided a copy of the Report when it began work on the SPRU site; in fact, URS did not receive the Report until the Environmental Protection Agency ("EPA") provided it in response to a Freedom of Information Act request in 2013.

28. Notwithstanding the 1999 Report, DOE proceeded with open-air demolition of the SPRU site. In 2006, another DOE contractor demolished Building K5 using an open-air demolition process that removed the building without erecting any additional physical barriers to replace the removed building structure. Almost immediately, the open-air demolition resulted in a radionuclide emission contamination incident. DOE later acknowledged that its failure to evaluate the potential for radionuclide emissions at K5 violated federal regulations and contributed to the K5 contamination incident.

C. URS Performed Decontamination And Demolition At The SPRU Site Under Task Order

29. On October 7, 2004, URS and DOE entered into an Indefinite Delivery/Indefinite Quantity ("IDIQ") contract for environmental remediation. The IDIQ contract incorporated a number of Federal Acquisition Regulations ("FAR") provisions, including FAR 52.243-2, Alternate II for changes and FAR 52.242-17 for government delay of work. In addition, the IDIQ contract set a fee ceiling of 7% for URS's work.

30. On December 13, 2007, DOE issued URS Task Order No. DE-AT30-08CC60014/SP16 (the "Task Order") under the IDIQ contract. The Task Order provided for URS to continue the D&D work at the SPRU site on a cost-reimbursable basis.

31. DOE did not share with URS the 1999 Report's recommendation against open-air demolition even though DOE knew URS planned to perform open-air demolition of Building H2. DOE also did not share with URS information regarding the 2006 contamination incident involving Building K5 that occurred when a different DOE contractor used the same open-air demolition process contemplated by URS.

32. By September 29, 2010, URS's open-air demolition of Building H2 had progressed to the point where the roof structure and most exterior and interior walls had been demolished and placed in containers for disposal. As workers exited the work area, hand and foot surveys detected radiological materials. URS immediately discontinued work in the area.

33. Following the 2010 contamination incident, URS devoted substantial resources to remediating and restarting D&D work promptly. URS responded to a cure notice issued by DOE, proposing a detailed Integrated Recovery Plan ("IRP") based on the HSA. URS and DOE corresponded about the plan, which would allow for URS to efficiently resume work, over several weeks.

II. URS AND DOE AGREED TO TASK ORDER MODIFICATION 35

34. From January 31 to February 4, 2011, URS and DOE met to negotiate a path for resumption of work at the site. At the end of these negotiations, on February 4, 2011, the parties signed Modification 35 to the Task Order, superseding the terms of the original Task Order.

35. In Modification 35, Section B.3, the parties agreed to an aggressive eleven-month schedule with a physical completion date of December 31, 2011 and a Target Cost of approximately $70 million to complete the remaining agreed-upon work. That schedule, and the Target Cost, would only be possible if (1) the HSA on which the parties were planning the project was accurate; (2) the parties' assumptions concerning the scope of the project—as

reflected in the IRP and in Modification 35 itself—were accurate; and (3) DOE used its "best efforts" to facilitate URS's performance.

36. Modification 35, like the prior Task Order, was not a fixed-price contract. Modification 35 provided that changes to the agreed-upon work, differing site conditions, pre-existing conditions, and work related to instability of the site's hillside would be performed on a cost-reimbursable basis.

A. DOE And URS's Negotiations Were Based On The IRP And The HSA

1. The IRP's Cost And Schedule Estimates Were Based On The HSA

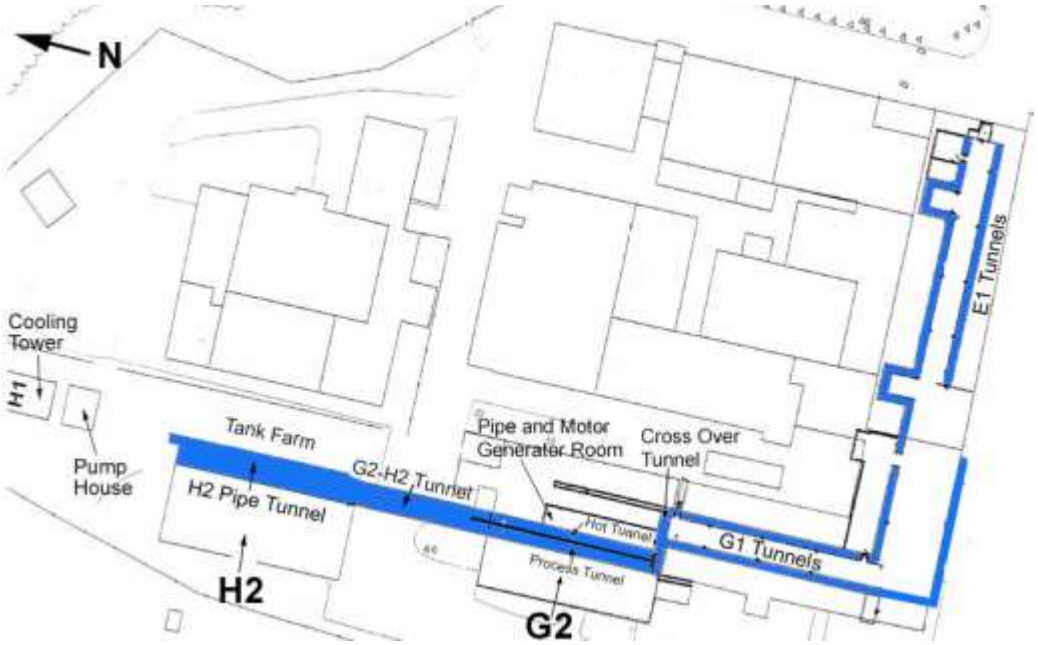
37. The Modification 35 negotiations were based upon URS's January 24, 2011 IRP, which included an eleven-month schedule, cost estimates, and technical details for the proposed path forward.

38. During the Modification 35 negotiations, DOE and URS reviewed the IRP's technical and schedule components in detail. The IRP's assumptions regarding the extent of contamination and the remaining work that needed to be performed were based on the HSA and URS's limited pre-modification characterization work.

2. DOE Commissioned The Creation Of The HSA

39. In 2003, DOE commissioned the creation of the HSA, which was finalized in April 2006. The HSA is a 263-page "summary of historical activities and radiological and chemical contaminant surveys and investigations" at SPRU that "addresses whether areas are impacted or not impacted by radioactive contamination, the contamination sources, the likelihood of contamination migration, threats to human health, and further characterization needs." The HSA contains information regarding the following SPRU facilities depicted in Figure 1 below: Building G2, Building H2, the tunnels between Buildings G2 and H2, the tunnels between Buildings G1 and E1, and the Tank Farm.

Figure 1



40. A project team with expertise in nuclear engineering and health physics, civil and mechanical engineering, waste management facilities, environmental remediation, and historical site assessment development conducted the historical research for the HSA. The project team reviewed approximately 1,000 documents, 13 videotapes, more than 2,000 drawings and maps, and approximately 680 historical photographs for pertinent information to include in the assessment. Documents reviewed included radiological surveys, sampling data, permits, authorizations, and facility records from the initial construction to the present. The videotapes included historical inspections and radiological surveys. In addition, the project team made site visits to observe site conditions and interview individuals with knowledge of the site.

3. DOE Believed And Represented That The HSA Was Comprehensive And Accurate

41. Prior to the D&D work on the SPRU site, DOE prepared a Nuclear Facility Engineering Evaluation/Cost Analysis ("EECA") to evaluate various options for the disposition of the SPRU site based on factors such as the relative costs of the options. DOE utilized the

HSA to prepare the draft EECA. In DOE's view, the HSA constituted "[a] comprehensive assessment of the SPRU facilities."

42. Because the site contractor was to rely on the HSA, DOE stated that the contractor would only need to perform limited additional characterization of the SPRU site as "a matter of routine" to ensure the safety of workers, the public, and the environment. The HSA clearly stated where more information was needed concerning certain conditions or specific areas of the SPRU site, thus indicating that where information was provided, it was thorough and accurate.

4. URS's Limited Pre-Modification 35 Characterization Of SPRU

43. Prior to the 2010 contamination incident, URS performed some of its own safety-related characterization in preparation for open-air demolition. As a result of the 2010 contamination incident, however, URS's work was halted, and URS was not permitted to conduct further work on the site (including, but not limited to, characterization efforts) until the parties agreed to Modification 35.

44. URS's safety-related characterization efforts were still at a relatively early stage when its on-site work was halted. The SPRU facilities were very large and many areas were inaccessible or had limited access. Specifically, Building G2 contained an estimated 22,000 to 30,000 square feet of floor space across four levels (at 325 and 327 feet; 337 feet; 348 feet; and 357 feet above sea level). Building H2 contained approximately 27,900 square feet of floor space across three levels (at 309 feet, 319 feet, and 332 feet above sea level).

45. URS's pre-2010 incident characterization efforts were primarily focused on workforce safety, rather than validating the specific data in the HSA or otherwise developing a cost estimate for cleanup. At the time that work was halted as a result of the 2010 incident, URS personnel had not yet ventured far from the frequently traveled areas of the facilities and there

were portions of the site that were inaccessible. URS's surveys prior to the 2010 incident also focused on compliance with site boundary limits and contamination controls applicable to the original Task Order—limits and controls that were made significantly more conservative and restrictive by Modification 35.

46. Because URS was not allowed to perform characterization activities during the period between the September 2010 contamination incident and the execution of Modification 35, URS's information about conditions on the site was largely limited to that set forth in the HSA. Both parties knew during the Modification 35 negotiations that, other than the information set forth in the HSA, URS had only limited information regarding site conditions as it reasonably had not characterized every portion of the site prior to September 2010.

47. URS did not discover conditions in its pre-Modification 35 work that indicated the HSA was unreliable as a source of information regarding the contamination and conditions of the site and, as of the date Modification 35 was executed, had no reason to know that the HSA would prove to be unreliable. To the contrary, given the level of effort involved in creating the HSA, and DOE's inclusion of it in Modification 35, URS reasonably expected the HSA to accurately identify site conditions, except where it specifically noted that further information was needed regarding a particular location or condition.

5. The HSA Was Foundational To Modification 35, And The Facts Contained Therein Were Material To The Parties' Agreement

48. The HSA was made part of both the initial Task Order and Modification 35 as one of the "Exhibit D SPRU Project Applicable Documents." And DOE required URS to refer to and use the information in the HSA. For example, the original Task Order and Modification 35 explicitly directed URS to use the HSA in the following ways:

- Section C.2.2, which addressed the removal of Building G2 and the G2/H2 Tunnel, provides: "The contractor shall utilize the information provided in Exhibit D SPRU Project Applicable Documents in planning this work."

- Section C.2.3, which addressed the removal of Building H2 and the tank vaults, provides: "The contractor shall utilize the information provided in Exhibit D in planning work."

- Section C.3, which addressed "Land Area Cleanup," provides: "The contractor shall use the historical documents provided in Exhibit D - SPRU Project Applicable Documents to aid in the determination of removal of contaminated soil, waste characterization, and perform any additional sampling necessary to complete this Task Order."

- A paragraph discussing the hillside drain collection system provides: "See the [HSA] Section 8.4 from Exhibit D for more information."

- In directing URS to prepare a safety basis evaluation and report, Modification 35 provides: "Exhibit D SPRU Project Applicable Documents, Nuclear Facility Historical Site Assessment, contains Technical information regarding the operations at SPRU."

49. In light of the contractual direction to rely upon the HSA and its inclusion in the Task Order and Modification 35, the HSA was a foundational document that shaped the parties' operating assumptions regarding the SPRU site's conditions, including the complexity of the cleanup requirements. As directed by the Task Order and Modification 35, URS used and relied on the information in the HSA to develop the workplan, schedule, and estimates that were shared with DOE in the IRP and that provided the basis for Modification 35.

50. DOE was aware during negotiations over Modification 35 that URS relied on material facts in the HSA and assumed them to be accurate. Indeed, the IRP demonstrates that information from the HSA was material to the parties' mutual understanding and agreement regarding Modification 35, stating that a "Key Assumption[]" for URS's cost and schedule estimate was that the "Nuclear Facility Historical Site Assessment provides worst-case bounding conditions."

51. Without an HSA or similar source of information concerning the conditions and contamination of the site, URS would have been unable to build the cost or schedule estimates it provided for use in the Modification 35 negotiations.

52. DOE similarly assumed that the HSA accurately represented the extent of contamination on the site. The EECA prepared by DOE estimated a cost of $160 million to demolish and remove the SPRU buildings, only slightly higher than the $145 million estimate that ultimately formed the basis of Modification 35, thus assuming the contamination information in the HSA was accurate.

53. Neither party would have believed that a $145 million to $160 million budget was reasonable, nor would they have agreed to such a budget, had they not mistakenly believed that the HSA contained accurate characterization information that URS could rely upon when performing its work.

54. The parties also relied on the data in the HSA when they agreed that the eleven-month schedule set forth in the IRP and Modification 35 was reasonable and achievable. Without being able to rely on the HSA as an accurate source of the type and extent of contamination at the SPRU site, it would have been impossible to complete the necessary characterization and other project work in less than a year, as URS would have had to spend significant time surveying and testing contamination at the site prior to decontamination. At no time did DOE state or even suggest to URS that the HSA's information was unreliable or inaccurate.

B. DOE And URS Agreed To A Cost-Sharing Structure

55. The parties estimated that the project could be completed at an anticipated *total* cost of $145 million. Up to this point, URS had incurred costs of approximately $75 million; therefore, the parties set a Target Cost for the completion of the Task Order, after Modification

35, of approximately $70 million. To demonstrate its commitment to the SPRU project, URS took the extraordinary step of offering to contribute $20 million of the anticipated $70 million cost to complete the project.

56. In exchanges leading up to Modification 35, URS and DOE grappled with how URS's offered contribution could be included under a cost-reimbursement contract. DOE's desired approach was for URS to contribute toward the estimated cost under a cost-reimbursement contract with a billing formula.

57. DOE assured URS that this approach would work smoothly. Ralph Holland, Assistant Director of the DOE-EM Consolidated Business Center ("EMCBC") Office of Contracting, assured URS that the contract was not being converted to a firm-fixed-price contract. Holland told URS that the key to success of this type of cost-reimbursement contract would be "rigid procedures . . . designed to reduce government caused delays," and described past DOE success with this type of approach. Specifically, he noted that "the Department had successfully in the past implemented approaches under cost reimbursement contracts at its closure projects, such as Rocky Flats and Fernald."

58. Ultimately, pursuant to Section B.4.1 of Modification 35, titled "Cost Incentive Fee," the parties agreed that DOE would reimburse URS for (1) allowable costs up to $105 million for work required by the Modification, (2) 50% of allowable costs between $105 million and $145 million for work required by the Modification, and (3) no allowable costs, other than those covered by exceptions, above $145 million for work required by the Modification. However, given the project schedule, target cost, and the parties' reliance on the HSA, this cost-sharing formula was subject to several key exceptions.

C. Exceptions To Modification 35's Cost-Sharing Provision

59. Modification 35's cost-sharing structure was subject to several exceptions where DOE retained responsibility and risk. Under the FAR Changes Clause incorporated into the IDIQ contract, FAR 52.243-2, Alternate II, and Section I of Modification 35, if a DOE-directed change caused an increase in the estimated cost of, or the time required for, performance of any part of the work, whether or not changed by the order, URS would be entitled to an equitable adjustment of its increased costs and fee.

60. In addition, Modification 35 identified several risks related to the condition of the SPRU site. These risks were expressly allocated to DOE through carve-outs to the release of claims language and a parallel discussion of prospective risk allocation at Section B.4.4 of Modification 35. Section B.4.4 provides:

> The DOE and the Contractor agree that there are certain costs that are not currently expected but that are potentially reimbursable to the Contractor that are specifically excluded from the cost sharing provisions of Section B.4.1 of this task order modification. The provisions of B.4.1 do not apply to changes resulting from an approved request for equitable adjustment relating to events that (a) occur after the effective date of Modification M035 and (b) that are reserved in the release of claims contained in Modification M035. The bounding conditions set forth in various parts of Modification M035 establish conditions under which no equitable adjustment is applicable, and above which an equitable adjustment may be applicable.

61. In turn, URS agreed in Modification 35 to release claims against DOE with the following exceptions, in relevant part:

> 5) Costs associated with the hillside instability issue[.]
>
> 6) Differing site conditions that have not been discovered by Contractor as of the date of this modification, and which could not have been reasonably anticipated based on a reasonable inspection of the site or available documentation prior to the date of the modification.
>
> 7) Pre-existing conditions with regard to which the Contractor has not, under the Task Order terms, assumed the risk except to the extent the acts or omissions of the Contractor cause or add to any liability, expense or remediation cost resulting from

> conditions in existence prior to the date of this modification, in which event the portion of the liability, expense, or remediation so caused by the Contractor is not excepted from this release.

62. Thus, under Modification 35, DOE bears the risk of costs resulting from changes, differing site conditions, pre-existing conditions, and hillside instability.

D. DOE Agreed To Cooperate And Facilitate Performance

63. In addition, to account for the aggressive project schedule and the parties' cost-sharing approach, and in accordance with Holland's representation, URS obtained a specific DOE commitment to use its best efforts to cooperate with URS and to facilitate URS's performance. The goal was to ensure that URS could perform the contract quickly and efficiently.

64. As suggested by Holland, the parties looked to the contracts for the Rocky Flats and Fernald projects for additional contract terms to facilitate performance. Notably, following the completion of the Rocky Flats project and several years before Modification 35 was executed, the Government Accountability Office ("GAO") prepared a report to determine, among other things, what factors contributed to the project's early completion and what lessons from the project could be applied to other DOE cleanup contracts (the "GAO Rocky Flats Report").

65. The GAO Rocky Flats Report found that the project "offers many lessons learned about innovative techniques . . . [and] accelerated cleanup processes," including the following DOE- and/or GAO-identified lessons learned:

- "Clearly define government oversight of the contractor, and limit the number of DOE personnel providing direction."
- "Use a flexible project management approach that allows the contractor to complete the project in the safest and most cost-effective manner."

- "Establish a clear 'end state' vision and risk-based cleanup defined in conjunction with specific future land/site use."
- "Use government-furnished services and items to integrate and manage the delivery of items not within the contractor's control."
- "Implement new technology that significantly accelerates the schedule and reduces total costs . . . ."
- "Take a consultative approach to cleanup decisions."

66. The GAO Rocky Flats Report also noted that "improved contract language . . . established a close working relationship between DOE and the contractor."

67. Both the Rocky Flats and Fernald contracts included clauses that obligated DOE to cooperate, streamline processes, eliminate non-value-added requirements, and use "best efforts" to achieve accelerated completion of the project. DOE and URS incorporated these obligations into Modification 35 at Sections H.920 and H.902.

68. Section H.920, "Statement of Mutual Commitment," expressly required DOE to use its best efforts to reduce non-value-add requirements, cooperate with URS, and facilitate URS's performance:

> The Government and Contractor recognize that reduction of cost and accelerated closure of this Task Order, in a safe and environmentally friendly manner, is a cooperative undertaking that requires both parties to seek innovative approaches to achieve the end objective. Streamlining process, eliminating non-value-added requirements, responsiveness, timeliness, cooperation, facilitation and effective communication are critical to achieving completion. Both parties agree through the term of this contract and Task Order to use their best efforts to (i) seek the reduction of non-value added requirements and processes that impede progress and (ii) to cooperate with the other party, and facilitate the other party's performance, of their respective obligations under the Contract and Task Order.

69. Additionally, Section H.902, titled Government Furnished Services/Items (GFS/I), states in relevant part:

> During the performance of the contract and in recognition of the cost sharing provisions contained herein, the parties agree that mutual efficiencies and

> performance improvements are necessary to reduce the actual cost and/or improve the schedule for the work.

70. In keeping with DOE's agreement to use its "best efforts" to cooperate with URS and facilitate URS's performance of the contract, DOE also agreed that URS was responsible for "determining the specific methods for accomplishing the work" under Modification 35. Section C.1.1, titled "Task Order Purpose and Overview," provides:

> This Task Order Statement of Work (SOW) reflects the application of approaches and techniques that emphasize performance based results/outcomes and minimize "how to" performance descriptions. The ID/IQ Task Order Contractor (hereinafter Contractor) has the responsibility for total performance under the Task Order, including determining the specific methods for accomplishing the work.

71. The inclusion of these terms was critical to URS's consideration (and acceptance) of Modification 35's cost-sharing provisions because URS believed such clauses would ensure DOE's assistance in meeting Modification 35's budget and schedule.

72. Nor would DOE and URS have agreed to the unique cost-sharing structure without being able to rely on the HSA. The GAO Rocky Flats Report, to which the parties looked when negotiating Modification 35, explained that "[t]he Rocky Flats cleanup began in the late 1980s and early 1990s with extensive characterization (sampling of soil, groundwater, surface water, and air)" and "*the extensive sampling* that was done at the site in the late 1980s and early 1990s, *together with historical documents* about the use and disposal of materials and wastes, *facilitated use of the accelerated process*." (emphases added). Thus, a fundamental requirement for the success of Modification 35's cost-sharing contract structure was accurate and fulsome historical data.

73. Ultimately, however, unlike at Rocky Flats and Fernald, the historical data for the SPRU facilities were not accurate and reliable, and DOE failed to meet its contractual obligations of cooperation and facilitation, causing massive delays and cost increases.

E. Modification 35's Anticipated D&D Approach

74. Modification 35 imposed a new approach to decontamination and decommissioning from what was envisioned under the original Task Order. Under Modification 35, URS would enclose Buildings G2 and H2 with large weather enclosures fitted with ventilation systems, and then would decontaminate highly contaminated areas within additional containments using portable ventilation units ("PVUs"). Accordingly, the first step along the project's planned critical path was completion of the building enclosures. After URS decontaminated Buildings G2 and H2 to certain agreed-upon contamination limits, URS could then remove the enclosures and proceed with open-air demolition of the structures.

75. Although DOE and URS set December 31, 2011 as the physical completion date, almost immediately after URS commenced performance under Modification 35, the project was hampered and delayed by DOE's changes to the contract requirements, the occurrence of events for which DOE had assumed the risk, and DOE's failure to honor its commitment to facilitate URS's performance. Ultimately, DOE-ordered changes, differing site conditions or pre-existing conditions, and breaches of DOE's contractual duties required URS to perform work that was more time-consuming, more complicated, and more expensive than what the parties agreed to in Modification 35.

III. DOE IMPOSED NEW NESHAP PERMITTING REQUIREMENTS

76. DOE D&D projects that involve the remediation of nuclear waste sites, like SPRU, must comply with NESHAP Subpart H ("Rad NESHAP"), which regulates radionuclide emissions at DOE sites under the Clean Air Act. Under Subpart H, a DOE facility is exempt from pre-construction or modification NESHAP permitting requirements if the facility is otherwise in compliance with Rad NESHAP, as detailed in its annual NESHAP report, and if the emissions from the new construction or modification would be below a certain level.

77. DOE and URS addressed the NESHAP permitting requirements during Modification 35 negotiations. DOE and URS agreed in Modification 35 that URS would obtain a NESHAP permit for soil excavation at the project, and incorporated into the contract schedule time to obtain the soil excavation permit. By contrast, Modification 35 did not require URS to obtain a NESHAP permit for the H2 and G2 enclosures and ventilation systems or PVUs. Indeed, Modification 35's completion date of December 31, 2011 would be impossible if NESHAP pre-construction permits were required for the enclosures.

78. URS understood that the enclosures and PVUs would be exempted from pre-construction permitting under Subpart H, and DOE knew that URS was operating under this basic understanding in entering the contract. In fact, URS explicitly stated in the IRP that one of its "Key Assumptions" was that "NESHAPS permitting *will not be required* for temporary ventilation discharges from portable HEPA filtered systems." (emphasis added).

79. But just two business days after signing Modification 35, URS joined a call with DOE and EPA, where it learned for the first time that EPA would require NESHAP pre-construction permits for the enclosures at the SPRU site.

80. Although this was the first URS heard that NESHAP permits would be required for the enclosures, DOE had known for months prior to signing Modification 35 that DOE was out of compliance with its NESHAP obligations for SPRU, that SPRU was therefore no longer eligible for the pre-construction permitting exemption, and that pre-construction permits would be required for the enclosures. Nonetheless, DOE never disclosed this information to URS.

A. Modification 35 Did Not Require URS To Obtain NESHAP Pre-Construction Permits For The Building Enclosures Or PVUs

81. Modification 35's deliverables were itemized in Section J, Attachment C. As specified in those deliverables, URS was required to submit NESHAP evaluations for *EPA*

approval for soil removal operations. By contrast, for all other operations URS was only required to submit evaluations for DOE review and comment; no EPA approval was required.

	Deliverable/Milestone Description	SOW clause	Due Date	Information or Approval	Frequency	Source
79	NESHAPS Evaluations Submittal(s) to EPA for soil removal operations. The Potential to Emit, and Proposed Air Monitoring Program. (Applies when MEOSI is greater than or equal to 0.1 mR)	C.5 C.10	150 calendar days or more prior to soil removal operations	DOE review and comment EPA approval	As needed	40 CFR Part 61
80	NESHAPS Potential to Emit Evaluations for operations not otherwise specified.	C.5 C.10.2	30 calendar days prior to use	DOE review and comment	As needed	40 CFR Part 61

82. Deliverable 79, which addresses the NESHAP soil permits, requires "Submittal(s) to EPA for soil removal operations." It allots 150 days for preparation, submittal, and review to ensure the permits would be in place by the time soil removal operations were scheduled to begin. Under the column "Information or Approval," it provides for both "DOE review and comment" and "EPA approval."

83. By contrast, Deliverable 80, which covers NESHAP requirements for all other work ("operations not otherwise specified"), including the enclosures and PVUs, does not require either submittal to, or approval by, EPA. This deliverable requires only "Potential to Emit Evaluations . . . ." It provides only thirty days for the task and only for "DOE review and comment."

84. Likewise, the deliverables related to H2 Tent Enclosure Design and G2 Enclosure Design—Deliverables 83 and 84—reflect no requirement for NESHAP permits or EPA review. They require only "DOE Review and Acceptance" within seven days (Building H2) or fourteen days (Building G2).

85. That Modification 35 did not require URS to obtain NESHAP permits for the enclosures and PVUs or contemplate URS's doing so is also evident in the Special Technical Provisions, Section C.10 of Modification 35. That section addresses the requirements for the G2 and H2 enclosures, but does not provide for NESHAP pre-construction permits. Instead, Section C.10.4 states that NESHAP standards are a point of reference for evaluating contamination levels *after* URS completed the decontamination within the enclosures and prepared for demolition. Section C.10.4 provides that "to ensure demolition operations occur safely and do not impact the workers, KAPL operations, the public, or the environment," "the contractor is shall [sic] perform ALARA ["as low as reasonably achievable"] evaluations, and NESHAPS evaluations to establish an acceptable fixed contamination levels on surfaces to prevent suspension of radioactivity in air as a result of demolition operations."

B. The Modification 35 Schedule Could Not Be Met If NESHAP Pre-Construction Permits Were Required For The Enclosures And PVUs

86. Section B.3 of Modification 35 provides that "[t]he physical completion date of this Task Order as defined by Section C is December 31, 2011." Likewise, the January 24, 2011 IRP provided an estimated completion date of December 31, 2011. This project completion date would be impossible to meet if Modification 35 imposed a NESHAP pre-construction permitting requirement on the enclosures and PVUs.

87. The first task on the project's critical path was completing the enclosures and ventilation systems. The IRP schedule provided that the enclosures and ventilation systems for Buildings G2 and H2 would be completed by March 2011 and April 2011, respectively, which would allow the remainder of the critical path activities to be performed expeditiously. And, under the baseline schedule implementing Modification 35, the H2 Enclosure System was to be completed by March 16, 2011.

88. But the preparation, submission, and receipt of a NESHAP permit takes significant time—two or more months for preparation and internal reviews, plus at least two months for EPA review. Where DOE and URS anticipated needing a NESHAP permit—for soil removal operations—they allotted 150 days, about five months, to complete the process.

89. If Modification 35 had required a NESHAP permit application and approval, the enclosure work could not even have *begun* by March 16, 2011—the date the H2 enclosure was scheduled to be completed. This would have made it impossible to meet Modification 35's December 31, 2011 completion date. By its very terms, Modification 35 did not require URS to obtain pre-construction permits for the enclosures and PVUs, and the December 31, 2011 completion date agreed to by the parties reflected their understanding that URS would not need to obtain the permits.

C. DOE Knew, But Failed To Disclose, That Pre-Construction NESHAP Permits Would Be Required

90. DOE knew well before the negotiation of Modification 35 that EPA considered DOE out of compliance with the Rad NESHAP rule at SPRU, that DOE was therefore no longer entitled to claim the exemption from pre-construction permitting at SPRU, and that URS would need to engage in the lengthy permitting process for the enclosure systems and PVUs.

91. On December 9, 2010, EPA informed DOE that the SPRU site was out of compliance with Rad NESHAP at least beginning with DOE's 2009 annual report, and perhaps as early as 2006. Specifically, EPA found that DOE violated Rad NESHAP regulatory requirements by reporting SPRU and the rest of the KAPL facilities separately in the 2009 annual report, thereby failing to present the emission rates for the combined site as a whole. At the December 2010 meeting, DOE "offered no evidence that it would disagree with this finding"

of noncompliance, and agreed to revise the "clearly incorrect" 2009 Annual Report that led to the non-compliance finding.

92. A February 1, 2011 draft EPA memorandum recorded that "DOE has not disputed that it is in violation of the rad NESHAP at SPRU. All work has stopped and cannot restart until the site is in compliance with the rad NESHAP."

93. On February 3, 2011—the day before the parties executed Modification 35—EPA again informed DOE that it had been out of compliance with the Rad NESHAP rule at SPRU since 2006; that the construction of the G2 and H2 enclosures would require a Rad NESHAP permit; and that EPA was targeting a compliance order around the end of March 2011.

94. URS was not present at these meetings and did not receive any of these communications until after Modification 35 was signed.

95. Although DOE and EPA had engaged in months of discussions regarding NESHAP compliance and the permitting requirements for SPRU in the lead up to Modification 35's signing on February 4, 2011, DOE never informed URS of EPA's view that the site was out of compliance; EPA's position that NESHAP permits would be required; the fact that DOE was not contesting these facts; or that EPA was planning to implement a compliance order.

D. URS Did Not Know, Nor Could It Have Reasonably Known, That The SPRU Site Was Out Of NESHAP Compliance

96. URS was unaware, prior to the signing of Modification 35, that EPA considered the SPRU site to be out of NESHAP compliance and thus that pre-construction permits would be required for the enclosures and PVUs. Nothing in Modification 35 indicated that the SPRU site was not in compliance with NESHAP.

97. It was DOE's responsibility, not URS's, to submit a unified report for the SPRU and KAPL site. Indeed, DOE's contracting officer later recognized that URS was not responsible for DOE's non-compliance resulting from its submission of separate site reports.

98. Short of being told by DOE or EPA, URS had no way of knowing or reason to suspect that DOE had not maintained the SPRU site's compliance and thus that the pre-construction permit exemption was unavailable.

E. DOE Knew Or Should Have Known Of URS's Ignorance Of The SPRU Site's NESHAP Noncompliance

99. DOE knew or should have known of URS's ignorance of the SPRU site's NESHAP noncompliance as this information was contained exclusively in non-public interagency communications.

100. Moreover, DOE knew that URS was unaware that the site was out of compliance, and therefore additional pre-construction permits would be needed, based on statements made by URS prior to the execution of Modification 35. Specifically, URS stated in the IRP that one of its "Key Assumptions" was that "NESHAPS permitting will not be required for temporary ventilation discharges from portable HEPA filtered systems." This "Key Assumption[]" was necessarily premised on the belief that the site was in compliance and eligible for the exemption. Thus, not only did DOE know URS was unaware the site was ineligible for the pre-construction permit waiver, it knew that URS had based its cost and schedule estimates on this understanding, and relied on it in agreeing to Modification 35's cost-sharing provision.

101. Finally, DOE knew or should have known that URS was unaware that the site was out of compliance because, as discussed above, URS agreed in Modification 35 to complete the work on a schedule that would be impossible were pre-construction permits required.

F. DOE Imposed A Requirement Not Contemplated In Modification 35

102. On February 8, 2011, two business days after the execution of Modification 35, URS learned for the first time on a call with DOE and EPA that NESHAP pre-construction permits would be required for the enclosures.

103. Recognizing the significant impact that requiring NESHAP permits would have on the project schedule, URS sent a letter on February 21, 2011 notifying DOE's contracting officer that URS considered obtaining a NESHAP permit for the enclosures to be a contract change.

104. Just a few days later, in a meeting between DOE and EPA on February 23, 2011 that URS also attended, DOE committed to obtain NESHAP permits before constructing the H2 and G2 ventilation systems. EPA stated that any ventilation systems designed and fabricated in advance of NESHAP approval ran the risk of non-approval, and that the installation of any such systems could not proceed until after EPA approved the NESHAP application.

105. In the hopes that some work could be done while waiting for the G2 and H2 permits, URS asked if PVUs could be used for decontamination of the high contamination areas in the sludge tent. EPA responded no—a permit for PVUs would also be required.

106. On March 5, 2011, URS again notified DOE's contracting officer that it considered the decision to submit applications for pre-construction permits for the enclosures to be a change to the contract, and that it would submit a request for equitable adjustment for its costs.

107. On March 7, 2011, DOE's contracting officer sent URS a letter ordering URS to "proceed as follows:

- URS should plan on providing EPA preconstruction permits, potential to emit calculations, and other NESHAPS program elements as needed for EPA approval.

- The timing of providing these submittals should be accounted in the schedule and planned to minimize the impact on the project.
- URS shall include this direction into the revised baseline and submit it to DOE by March 11, 2011."

108. On April 29, 2011, URS sent a letter to DOE's contracting officer yet again stating that the NESHAP permitting requirement constituted a change to the contract, and asserting that URS was entitled to an equitable adjustment for costs stemming from that change.

G. DOE Failed To Timely Submit NESHAP Permit Applications To EPA

109. Thereafter, pursuant to DOE's order, URS prepared the draft NESHAP permit applications, a time-intensive process. URS submitted the draft NESHAP application for the H2 enclosure and ventilation system to DOE on May 13, 2011, and submitted the draft NESHAP application for the G2 enclosure and ventilation system to DOE on May 20, 2011.

110. DOE waited six weeks before sending the H2 application to EPA on June 28, 2011, and waited eight weeks before sending the G2 application to EPA on July 22, 2011. EPA issued the permits for the G2 and H2 enclosures on November 30, 2011, and DOE transmitted them to URS on December 2, 2011. The permits finally arrived less than one month before the SPRU project was originally scheduled to be completed.

111. Instead of immediately beginning the critical path activities of procuring and erecting the H2 enclosure in February 2011 as URS and DOE had planned and Modification 35 provided, URS instead spent months obtaining the permits. Ultimately, the newly imposed requirement to obtain pre-construction permits caused 245 days of delay to the critical path.

H. DOE Acknowledged This Change And Paid URS For The Costs Incurred Preparing The NESHAP Permits, But Failed To Reimburse Costs From Critical Path Delays

112. On August 5, 2011, URS submitted a request for equitable adjustment (REA 11-005) for increased activity-related costs associated with the change, including "the

preparation, review, and approval of NESHAP pre-construction permit applications, and subsequent permit implementation support." URS submitted a separate request for equitable adjustment (REA 11-003) for the schedule impacts associated with DOE's direction to obtain the additional NESHAP permits.

113. In 2012, DOE paid URS $850,000 to settle the costs of URS's REA 11-005, effectively recognizing this work was not part of the scope of Modification 35.

114. However, DOE has not reimbursed URS for the costs of the 245-day delay from being required to obtain the out of scope permits or for unwaived contract administration costs due to this change.

I. DOE Failed To Disclose Vital Information That Undermined A Basic Assumption Of The Contract, An Assumption Critical To URS Agreeing To Modification 35

115. The ability to begin enclosure and ventilation systems work promptly without the need for pre-construction NESHAP permits was critical to URS agreeing to Modification 35. As discussed above, URS specifically stated that this was a key assumption in developing its cost and schedule estimates in its IRP; it was also a basic assumption under which URS entered Modification 35. The fact that NESHAP permits were ultimately required fundamentally undermined the agreed-upon budget and schedule for Modification 35's work. Indeed, the agreed-upon schedule was impossible to complete once this extra-contractual obligation was imposed.

116. Had URS known that EPA believed the site was out of compliance and that NESHAP permits would be required, that DOE acknowledged and did not contest this fact, and that EPA was pursuing a compliance order—facts which would substantially increase the time and costs of completing the project—URS would not have agreed to the cost-sharing

arrangement set forth in Modification 35 and would have instead negotiated a cost-reimbursable contract without a cost-sharing formula.

117. Accordingly, URS incurred significant unreimbursed and unwaived activity- and delay-related costs as a result of DOE's failure to disclose vital information that undermined a key assumption pursuant to which URS entered the contract.

IV. DOE ORDERED URS TO REMEDIATE HILLSIDE INSTABILITY

118. Prior to entering into Modification 35, URS and DOE understood that the hillside adjacent to Buildings G2 and H2 was unstable. In Modification 35, the parties explicitly provided that costs incurred as a result of the hillside's instability would not be subject to the parties' cost-sharing agreement.

119. In August 2011, torrential rains from Hurricane Irene caused a catastrophic hillside failure. DOE ordered URS to stop using heavy equipment necessary for critical path work, and to expend months of effort to remediate the hillside. Hillside instability issues required immediate repairs, led to extensive project redesigns and workarounds, and delayed the project's critical path by more than fifteen months.

120. DOE has acknowledged its responsibility to reimburse URS for its costs related to hillside instability through partial payment of URS's expenses. However, DOE has not reimbursed all of the costs URS incurred due to hillside instability.

A. Hillside Instability Was A Long-Standing Issue Preceding URS's Work At SPRU, The Risk Of Which Was Allocated To DOE

121. The relevant hillside at SPRU forms the western portion of the site, immediately adjacent to Buildings G2 and H2. The instability of this hillside was a longstanding and well-known issue. Indeed, a geotechnical report commissioned by DOE in 2001 advised of the possibility of a hillside failure if the slope were subjected to "[s]udden and complete saturation."

122. Given the concerns about instability and the potentially devastating effects of a hillside failure, DOE agreed to bear any costs associated with hillside instability. Modification 35's release of claims excludes "[c]osts associated with the hillside instability issue." Further, Modification 35's scope of work did not include any hillside remediation.

B. Hurricane Irene Caused Hillside Failure And Delayed Critical Path Work

123. In August 2011, torrential rains from Hurricane Irene caused a catastrophic hillside failure at SPRU. The rains led to mudslides from the hillside near Buildings G2 and H2. These mudslides undermined a drainage system that collected contaminated water from around the basement of Building H2. The mudslides also disturbed electrical poles at the site, among other damage.

124. Following the hillside failure, DOE's contracting officer imposed a twenty-five-foot heavy equipment exclusion zone from the hillside's edge, preventing URS from using the heavy equipment necessary to conduct critical path activities for the construction of the H2 enclosure system. DOE also issued Modification 44 to provide the official change order direction to that effect. DOE thus required all activities on the critical path stopped until the hillside was remediated, and the focus shifted to repairing the hillside.

C. Pursuant To Orders From DOE, URS Remediated Hillside Instability

1. URS Took Emergency Action To Respond To Hillside Instability

125. After Hurricane Irene hit, DOE directed URS "to proceed immediately with implementation of short term measures and development of an approach for long term resolution to stabilize concerns over the reliability of the Hillside sump and the integrity of the pipe that connects the overflow tank to the sump." This order was confirmed in Modification 44.

126. URS immediately shifted its attention to emergency measures to address the hillside failure, and URS deployed its crews to undertake clean up. Power poles had to be immediately replaced, and the hillside drainage system required urgent stabilization and repair.

127. URS outlined the remaining issues and proposed solutions in a September 1, 2011 letter to DOE's contracting officer. In that letter, URS stated that "Modification 35 expressly provides that costs associated with the hillside instability issue are excluded from the release given by URS in Mod 35 and from the cost sharing formula in that contract modification," and reserved its rights to submit a request for equitable adjustment for the cost and schedule impacts it would incur as a result of the hillside instability and impacts from Hurricane Irene.

128. On September 14, 2011, DOE responded by issuing unilateral contract Modification 44, which "provide[d] the official change order directions given on August 30, August 31, September 1, 2011, and September 12, 2011 to URS pertaining to Hurricane Irene impact to the SPRU Project site."

2. Hillside Stabilization Consumed The SPRU Site For More Than Fifteen Months

129. URS continued to communicate with DOE regarding the hillside work—proposing options for quickly and efficiently remediating the instability issues and seeking DOE's guidance on its desired approach and funding. But nothing progressed quickly or easily. Months passed while DOE considered options, requested additional approaches, and sought to secure funding. Ultimately, hillside instability issues prevented URS from returning to critical path work for more than fifteen months.

a) September 2011: URS Developed A Two-Phased Approach For Hillside Repairs

130. On September 22, 2011, URS sent DOE's contracting officer a Rough Order of Magnitude ("ROM") proposal that recommended a conceptual approach for hillside repair.

131. URS proposed a two-phased approach for hillside remediation. First, URS would install micropiles to support the hillside sump, which was part of the hillside drainage system, and to support the H2 ventilation system. Second, URS would undertake longer-term measures to repair the hillside through installation of a buttress wall. URS's ROM estimate was $19,900,000. Assuming prompt DOE approval and funding, URS projected it could complete Phase I work by December 2011.

132. By letter dated September 29, 2011, DOE's contracting officer "agree[d]" that URS should complete "Phase 1 of the hillside stabilization prior to resuming erection of the H2 enclosure." DOE's contracting officer "acknowledge[d] that URS and the SPRU project has had some major challenges and impacts due to Hurricane Irene." DOE's contracting officer further stated that "the extent to which impacts to the project are solely attributable to Hurricane Irene or the stand down associated with the heavy equipment are yet to be determined and will be subject to further investigation," thus indicating that costs and delays that were attributable to Hurricane Irene or the heavy equipment stand down would be fully reimbursable.

133. The next day, on September 30, 2011, DOE issued Modification 48. Modification 48 established a separate cost-reimbursable CLIN (CLIN 0003) to cover costs associated with hillside instability issues and to fund the "Hurricane Irene impact at the SPRU Project site." DOE explicitly recognized in Modification 48 that these costs were "specifically excluded from the cost sharing provisions of Section B.4.1 of the task order."

b) October 2011 Through February 2012: DOE Considered Options, Requested Additional Approaches, And Sought To Secure Funding

134. In October 2011, DOE's contracting officer requested that URS submit another, more detailed design for near-term project priorities and workarounds. On November 7, 2011, URS submitted the requested plan to DOE's contracting officer. It also submitted a request for

equitable adjustment to DOE's contracting officer for certain unreimbursed costs incurred due to Hurricane Irene. However, URS received no response to its plan for nearly two months. Without sufficient direction from DOE, URS had no choice but to demobilize personnel and subcontractors and discontinue most Phase I hillside stabilization design activities. URS repeatedly advised DOE's contracting officer that the delay was impacting the critical path schedule.

135. Finally, on December 23, 2011, DOE issued Modification 50, "direct[ing] URS to proceed with the necessary foundation installation required because of the degraded bearing capacity of the soil adjacent to the western slope of the upper level site area." Modification 50 further explained: "This direction includes installation of micropiles or other support structures as necessary to complete the installation of the vestibules on the North and South ends of the H2 pad enclosure, and the ventilation system."

136. But Modification 50 also required URS to reevaluate the original plan, submit yet another revised proposal regarding the micropiles to support the ductwork for the H2 ventilation system, and obtain re-approval from DOE before proceeding with any hillside repairs. Prior to submitting its revised proposal, URS had to remobilize personnel and subcontractors that had been demobilized due to lack of DOE funding, as well as revise its contract with its subcontractor to incorporate the additional work needed for the re-examination. URS sent a revised proposal to DOE's contracting officer on February 8, 2012, which DOE approved on February 24, 2012. In its approval letter, DOE acknowledged that the installation of supports for the H2 building was "necessary as a result of the destabilization of the hillside."

137. Six months after Hurricane Irene caused hillside failure at the SPRU site, URS finally had approval from DOE to begin the first phase of remediating hillside instability.

Execution of the work then took another ten months, with multiple rounds of changes, revised work packages, meetings, and funding delays.

c) February Through December 2012: Phase I Micropile Installation Proceeded Haltingly Due To Extensive Changes To Planned Work And Because DOE Delayed Installation Of H2 Foundation Micropiles

138. URS's plan for micropile installation included installation of two micropiles to support the hillside sump and installation of forty-six micropiles to support the foundation for the H2 enclosure ventilation system. Thirteen of the micropiles had to be installed in or near an identified "area of concern" in Modification 35—a volatile organic compound ("VOC") contamination area or "plume" in the hillside.

139. URS began Phase I work with the installation of the two micropiles to support the hillside sump. URS began developing the work package in February 2012 and sent it to DOE for comment in mid-March 2012. After waiting for DOE review and approval, URS began fieldwork on the hillside sump micropiles on April 10, 2012. URS projected that this work would take nine workdays. However, throughout April and May, URS was required to develop multiple work packages in response to DOE field changes, send several rounds of proposed resolutions to DOE, and hold meetings with DOE to discuss the changes. The field work for the first two micropiles was ultimately completed on May 21, 2012, approximately one month behind schedule.

140. While installation work for the two hillside sump micropiles continued, URS began planning installation of the H2 enclosure foundation micropiles. From April through August 2012, URS and DOE discussed the method for micropile installation, including air drilling and a slower method, water drilling. As URS explained in a letter copying the contracting officer, DOE had indicated that it did not support air drilling and insisted on being

involved in deciding the path forward. Following further discussions, URS submitted a revised work package incorporating water drilling on August 2, 2012, which DOE approved on August 13, 2012.

141. URS began installing the H2 foundation micropiles the same day it received approval from DOE, and completed installation of the thirty-three micropiles outside the VOC area of concern on October 17, 2012.

142. Finally, the thirteen H2 enclosure foundation micropiles in the area affected by the VOC plume had to be installed. URS submitted a work plan for the installation of the first VOC-affected micropiles on September 30, 2012, and proceeded to respond to multiple rounds of comments on the plans. DOE sought approval from other agencies, and drilling operations were on hold pending this approval. DOE finally approved the work plan in late October 2012.

143. URS began drilling on October 30, 2012 and continued work through the month of November. URS completed the installation of the H2 enclosure foundation micropiles on December 18, 2012, finally enabling the return to critical path work.

d) URS Submitted Proposal 12-009 To Define Work And Seek Equitable Adjustment

144. On March 26, 2012, while work was ongoing, URS submitted to DOE's contracting officer Proposal 12-009 for contractual definitization of the scope of work, additional costs, and extended programmatic support attributable to the hillside instability issues.

145. The proposal included actual costs for work performed from September 2011 to December 2011, estimated costs for January 2012 through September 2012, costs for schedule delays, and URS's fee for the work.

146. The proposal addressed both new activities that were prerequisites to resuming critical path work (such as micropile installation) and the necessary redesign of some

Modification 35 base scope work as a result of hillside instability. URS requested a total estimated amount of $36,714,859.

D. DOE Acknowledged URS's Entitlement To Costs For Hillside Instability Work And Delays

147. DOE's contracting officer, recognizing DOE's contractual acceptance of the risk of hillside instability, allocated funding and created the cost-reimbursable CLIN 0003 for costs associated with hillside instability issues.

148. DOE's contracting officer also issued contract modifications acknowledging that costs related to storm impacts and DOE's direction to stand down and resolve hillside instability issues were changes for which URS was entitled to reimbursement.

149. URS invoiced DOE for hillside stabilization work under CLIN 0003, and DOE recognized and partially complied with its obligation to reimburse these expenses. Beginning in September 2011, DOE paid invoices submitted by URS for certain hillside stabilization expenses. DOE reimbursed URS—at least partially—for the costs of urgent hillside repairs; Phase I micropiles; the Phase II buttress wall; schedule delays due to hillside instability; Proposal 12-009 costs related to both project work and schedule delays; and programmatic support costs.

150. DOE has reimbursed URS for both activity- and delay-related costs, acknowledging that its obligation to bear the risk of hillside instability covers both the activity- and delay-related costs of work associated with the hillside instability issues. Likewise, the contracting officer's 2019 COFD held that URS's hillside instability claim had "partial merit," apparently conceding URS's entitlement to reimbursement. However, DOE has refused to reimburse the balance of URS's costs incurred due to hillside instability.

E. URS Incurred Significant Unreimbursed Costs And Delays In Remediating The Hillside

151. DOE required URS to complete the H2 enclosure before resuming D&D operations in either building (a requirement of which DOE's contracting officer was aware), thus establishing the H2 enclosure and ventilation system as the project's critical path.

152. Hillside instability issues after Hurricane Irene prevented URS from continuing critical path work on the H2 enclosure and ventilation system for a total of 470 calendar days. Before Hurricane Irene hit the site, the projected date for completing the H2 building enclosure and ventilation system was November 16, 2011. When URS completed micropile installation on December 18, 2012 to address the instability caused by Hurricane Irene, the projected completion date was revised to February 28, 2013.

153. DOE itself acknowledged that hillside instability caused critical path delays. For instance, in a September 29, 2011 letter, DOE's contracting officer noted that she supported URS's project management weatherization work "due to URS's inability to work on H2 at this time and focusing its resources on other project work not impacted by the hillside instability issue."

154. URS incurred delay-related costs from 470 days of critical path delay and activity-related costs from the hillside stabilization work. DOE reimbursed URS for only a portion of these costs, and URS is entitled to reimbursement for the balance.

V. DOE ORDERED CHANGES TO THE G2 AND H2 ENCLOSURES

155. In the months leading up to Modification 35, URS and DOE discussed performing future D&D work within an enclosure. This would require enclosing the H2 pad (since the building itself had been demolished) and the G2 building. URS submitted proposed enclosure

designs, and proactively addressed comments and questions on the designs from both DOE and NR.

156. Section C of Modification 35 provides for a streamlined design and review for the Building H2 and G2 enclosures and ventilation systems. But instead of accepting a design that met the contractual requirements or using its best efforts to facilitate the performance of the work called for by Modification 35, as it was contractually obligated to do, DOE refused to approve URS's design and (at URS's expense) added requirements to the enclosure systems, directed URS to develop and submit extensive design documentation and analysis, and re-sequenced work to comply with its separately negotiated consent order with EPA.

A. Modification 35 Set Limited Performance Standards For The Enclosures

157. In line with the directives in Section C.1.1 to "emphasize performance based results/outcomes" and that URS would have "responsibility for total performance under the Task Order, including determining the specific methods for accomplishing the work," Modification 35 set out performance standards for the enclosures and gave URS the freedom to select specific designs with streamlined review and approval by DOE.

158. Modification 35 set out the requirements for the H2 and G2 enclosures in Section C.10.1. For Building H2, Modification 35 required "[a]n enclosure capable of maintaining a slight negative pressure, with HEPA filtered ventilation." Similarly, for Building G2, Modification 35 instructed URS to "enclose the remaining structure with a durable fire retardant material (not plastic) that will be capable of maintaining a a [sic] inward airflow using HEPA filtered ventilation."

159. Under Modification 35, Section C.10.1, the enclosures would be considered only a "secondary means of contamination control." Accordingly, within both enclosures, URS was required to "establish additional engineered controls for the process areas, including but not

limited to additional local HEPA filtered ventilation, negative pressure enclosures, curtain enclosures [airlocks], and containments."

160. As set out in Section C.10.1 of Modification 35, "[k]ey features" of the H2 enclosure included being able to "[w]ithstand snow and wind loads" and containing "[a] means for collection and diversion of rainwater runoff from the enclosure to preclude the storm water from becoming contaminated and requiring processing." Likewise, "[k]ey features" of the G2 enclosure included being able to "[w]ithstand wind loads" and that "[t]he existing roof drains connected to the storm water systems will continue to be used to collect direct clean water." These limited performance requirements were consistent with the IRP, which explained that the principal purpose of the enclosures was "weather protection, prevention of water intrusion, or improving work conditions to allow all-weather and 24/7 access to enclosed work areas."

161. Modification 35, Section C.10.1 provides that the design of the enclosure "shall be submitted, including a narrative discussing how *previous* comments were addressed, to DOE for review and acceptance." (emphasis added). DOE was required under Section C.10.1 to respond within one week of submittal of the H2 design, and within two weeks of the submittal of the G2 design. Likewise, Deliverables 83 and 84 set out in Section J, Attachment C of Modification 35 provided for "DOE Review and Acceptance" of the H2 tent enclosure design and the G2 enclosure design with deadlines of "7 calendar days" and "14 calendar days," respectively. Deliverables 83 and 84 further provided that these Deliverables would be required just "[o]nce." Modification 35 did not list either NR or EPA as entities that would review, comment on, or approve the enclosure designs.

B. DOE Imposed Extra-Contractual Requirements On The Enclosures And Interfered With URS's Right to Determine The Specific Methods for Accomplishing The Work

162. Despite Modification 35 setting only limited performance standards, DOE refused to accept enclosure designs that met those standards. Although Modification 35 contemplated the enclosures primarily being used as weather enclosures, DOE instead directed URS to design and build the enclosures and ventilation systems for primary contamination control. DOE also imposed extra-contractual fire prevention and lighting requirements, further increasing costs. DOE's orders for URS to remediate hillside instability also caused inefficiencies in URS's enclosure work. Finally, DOE required URS to accelerate certain work and perform certain work out of sequence so that DOE could meet benchmarks from a separately negotiated consent order with EPA.

1. DOE Imposed Unreasonable And Extra-Contractual Requirements On The Ventilation Systems

163. On February 7, 2011—the first business day after Modification 35's execution—URS submitted its final design for the H2 enclosure system, along with "[p]revious comments and responses" to DOE, copying DOE's contracting officer. The design was largely the same as one previously submitted to DOE and proposed in the IRP and on which DOE and NR had already commented.

164. To meet the performance specifications for the ventilation system set forth in Modification 35, URS planned to install single train HEPA filtration systems specified for temporary use. An outside vendor was to fabricate the H2 ventilation system offsite and deliver it for final assembly and installation. URS used the same approach and performance specifications on the Oak Ridge nuclear clean-up project; it met all DOE requirements for a

Category 3 nuclear facility, and URS believed it was more than sufficient for SPRU, which is less-than-Category 3.

165. URS's submission was a final design reflecting pre-Modification 35 discussions and comments; thus, Modification 35 required DOE to review and accept it within 7 days.

166. When DOE provided its response to the H2 enclosure design on February 16, 2011, however, it did not approve the pre-vetted structure; instead DOE sent URS sixty-seven detailed comments, copying DOE's contracting officer.

167. On February 21, 2011, URS sent a letter to DOE's contracting officer stating that Modification 35 required DOE to approve the enclosure designs within seven calendar days of submittal, and that URS submitted the H2 tent enclosure design to DOE, but DOE had not approved the enclosure within the time period required by the contract. URS advised that continued delays in approving the enclosure design would impact the project schedule.

168. Rather than proceed as scheduled, URS was required to engage in further discussions and technical exchanges with DOE, including participating in at least three meetings with DOE to discuss the H2 enclosure design in February and March 2011.

169. DOE described its "concerns" with URS's design, which already met Modification 35's requirements, in a March 4, 2011 letter copying DOE's contracting officer:

> DOE's primary concerns with the package were: 1) the lack of a specified design operating differential pressure value that would meet the intent of the negative pressure requirement of the Task Order; 2) lack of a technical basis for the ventilation system demonstrating the specified 2 air changes per hour flow rate is sufficient to ensure that airborne contaminants generated in the enclosure during D&D activities will not exceed ambient air quality and industrial hygiene levels of concern; and 3) the package appeared to lack the comprehensive detail necessary to obtain a NESHAPS permit to construct and operate the ventilation and enclosure system.

These items were all outside the scope of the performance specifications set forth in Modification 35, ignored URS's contractual right to determine the "specific methods for accomplishing the work," and constituted changes to the contract.

170. In that letter, DOE further directed URS to "ensure that the enclosure and ventilation system designs result in an overall system that meets Task Order requirements, addresses DOE concerns, and functions as an effective barrier for airborne contamination control." This also constituted a change as Modification 35 did not contemplate that the H2 enclosure *alone* would "function[] as an effective barrier for airborne contamination controls." Indeed, DOE apparently recognized as much by specifying that DOE had to meet this requirement *in addition to* "meet[ing] Task Order requirements."

171. DOE was clear that its comments were not mere suggestions, and that approval would not be granted unless they were followed. For example, DOE stated: "DOE *expects* that the preliminary design will contain sufficient technical basis to address the DOE concerns regarding nominal operating pressure, air changes, ambient air quality within the enclosure, and will result in an enclosure and ventilation system meeting NESHAPS permitting requirements and allow for the submittal of a pre-construction permit application to USEPA." (emphasis added). Likewise, DOE expressly stated that its acceptance of the enclosure was "[b]ased on" URS meeting the extra-contractual standards DOE set out in the letter. And DOE recognized that URS would be required to change its approach based on DOE's directions: "[o]n March 2, in response to the DOE concerns noted above, URS identified that they would *change the approach to completion* of the draft H2 Enclosure Ventilation Specification."

172. By refusing to accept an enclosure design meeting Modification 35's contractual requirements, DOE breached its express duties to use its best efforts to reduce non-value-added

requirements, cooperate, and facilitate performance, and its implied duty to cooperate, and interfered with URS's right to determine the specific methods for accomplishing the work.

173. DOE's contracting officer had full knowledge of DOE's orders concerning the enclosures, and never instructed URS to disregard them. Indeed, URS again notified DOE's contracting officer by letter on May 23, 2011 that a "major change[]" since execution of Modification 35 was "[s]ignificantly more robust H2 and G2 enclosures and ventilation systems than that assumed in contract modification M035 driven by DOE comments for review and acceptance." DOE's contracting officer either directly approved these directions, or ratified them through knowing acquiescence.

174. DOE's directions, and refusal to approve a design meeting Modification 35's performance requirements, fundamentally changed the nature of the enclosures, and the specific methods URS had chosen to accomplish the work. As stated in the IRP, the "principal purpose" of the enclosures was "weather protection, prevention of water intrusion, or improving work conditions to allow all-weather or night-time access to enclosed work areas." The enclosures were "not intended to become contaminated during normal operations;" rather, "[w]ork involving the handling, packaging, and/or processing of high levels of radioactive contaminants [would] be conducted within [the smaller containment] enclosures."

175. As a result of DOE's orders and refusal to accept a design meeting Modification 35's performance requirements, URS had to design and build ventilation systems for the G2 and H2 enclosures that went far beyond the plans submitted in the IRP and Modification 35, Section C.10's requirement to have "inward airflow" or "slight negative pressure." To meet DOE's demands, URS ultimately produced seventy-two design drawings and thirty-one specific procedures, calculations, and specifications, and had detailed design work performed by an

architect-engineer subcontractor—deliverables not required under Modification 35. The final HEPA filtration system included three trains on the H2 enclosure and two trains on the G2 enclosure, as well as mixing boxes (common points where air is mixed from different duct systems). Under the final ventilation system plans, portable containments using PVUs were "optional" rather than an integral part of the containment mechanism.

176. DOE's heightened requirements caused URS to produce to a far more robust, and far more expensive, system than was agreed to in Modification 35.

2. DOE Imposed Unreasonable And Extra-Contractual Requirements For The Fire Protection System And Lighting

177. The sole performance specification pertaining to fire protection in Modification 35 was in Section C.10.1 and simply required that the G2 enclosure be made of a "durable fire retardant material." Accordingly, URS planned to install fire detection systems like those it used for similar temporary projects—standard smoke detectors. This approach was in line with industry custom and practice.

178. Among DOE's sixty-seven comments on the H2 enclosure on February 15, 2011, which it sent to URS and the contracting officer, however, were the following statements with respect to fire protection:

> 1. Add the requirements for Fire Detection and Alarms. The system is expected to be consistent with the Transitional Fire Hazard Analysis for the project which was issued last year.
>
> ***
>
> 4. Verify the visual and audible emergency communication systems are consistent with the Transitional Fire Hazard Analysis.

179. URS responded, in a letter copying the contracting officer, that it "will provide a fire alarm and detection system in a separate design from the enclosure *if it is determined that it*

is required." On April 20, 2011, in a letter copying the contracting officer, DOE indicated that a comprehensive fire alarm system was indeed required.

180. In a letter copying the contracting officer dated January 27, 2012 and received on February 6, 2012, DOE informed URS of "other fire protection requirements associated with the H-2 enclosure" and asserted that "URS is expected to install a fire detection and alarm system in the H-2 enclosure and maintain them until demolition activities precludes such use."

181. On February 10, 2012, URS responded to DOE, copying DOE's contracting officer, noting that the National Fire Protection Association Standard for Safeguarding Construction, Alteration, and Demolition Operations "does not require fire detection and alarm systems," but rather "[f]ire alarm reporting . . . can be made through telephone service (i.e., a detection/alarm system is not mandatory)." URS further stated that it would monitor for fires through "hourly rounds during D&D operations and one hour after cessation of D&D operations within the enclosures to report any emergency should one arise." URS stated that any other requirement insisted upon by DOE would be considered a change and that it would be entitled to an equitable adjustment for this additional work.

182. Also on February 10, 2012, in a letter copying DOE's contracting officer, DOE added still further requirements, stating that "URS is expected to install a fire detection and alarm system that will result in a notification to KAPL ESS in the G-2 enclosure and maintain them until such demolition activities precludes such use." URS replied on February 22, 2012 in a letter to the contracting officer, reiterating that such a system was not required by either Modification 35 or the governing regulations and thus constituted a change for which URS would be entitled to an equitable adjustment. DOE continued to insist on an elaborate fire protection system throughout the rest of 2012 and 2013.

183. By refusing to accept an enclosure design meeting Modification 35's contractual requirements, DOE breached its express duties to use its best efforts to reduce non-value-added requirements, cooperate, and facilitate performance, and its implied duty to cooperate, and interfered with URS's right to determine the specific methods for accomplishing the work. Moreover, DOE accepted the benefits of this robust fire protection system and, DOE's contracting officer either directly approved these directions, or ratified them through knowing acquiescence.

184. URS proceeded to design a robust fire detection system based on DOE's directions. But even as URS designed the system, DOE continued to add requirements. For example, DOE required fire detection systems that would detect a fire in any part of the enclosure (versus the more standard URS-proposed heat detection system covering the major portions of the building). As a result of this requirement, URS installed and programmed a video camera-based system with both flame and smoke detection capabilities.

185. In addition to the fire protection system, DOE required extensive lighting throughout the enclosures even though Modification 35 contained no specific lighting requirements. In line with Section C.1.1's statement that URS is responsible for "determining the specific methods for accomplishing the work," URS planned to install lighting in line with what it had used for similar projects and in line with industry custom and practice. URS's standard practice was to install enough lighting to make working in the buildings safe and to use portable lighting for areas where extra lighting was needed for specific work tasks. Instead, DOE demanded high levels of lighting in all portions of the building. DOE's demands interfered with URS's contractual right to determine the specific methods for accomplishing the work, and constituted changes to the scope of work agreed to by the parties.

3. DOE's Orders To Remediate Hillside Instability Delayed The H2 Enclosure And Ventilation System

186. In the summer of 2011, URS progressed on non-critical H2 enclosure construction while awaiting receipt of the critical NESHAP permit. In August 2011, the site experienced torrential rainfall from Hurricane Irene. The hillside behind the G2 and H2 buildings failed, and pursuant to DOE's orders, URS shifted nearly all its efforts to repairing and stabilizing the hillside. For example, Modification 44 confirmed an order for URS to implement a twenty-five-foot exclusion zone on the edge of the hillside, and Modification 50 required URS to install micropiles to shore up the hillside. The hillside repair and stabilization effort became the critical path, as other work could not meaningfully progress until it was completed.

187. URS completed construction of the east side, west side, and roof of the H2 enclosure by the end of January 2012, but hillside micropile installation delayed final completion of the north and south sides and delayed installation of the ventilation system, a necessary prerequisite to finishing the enclosures. The micropile installation was completed on December 18, 2012; only then could URS complete the ventilation system construction.

4. DOE Directed URS To Perform Work Out Of Sequence To Satisfy DOE's Obligations Under Its Consent Order With EPA

188. On November 17, 2012, DOE's contracting officer directed URS to accelerate certain work in order to comply with a consent order that DOE had separately negotiated with EPA regarding DOE's NESHAP noncompliance. That direction was also confirmed in unilateral Modification 70.

189. The DOE-EPA Consent Order required that DOE have the H2 ventilation system operational by February 28, 2013, but did not require that the enclosures be functionally operational for D&D work. DOE provided funding for URS to increase its work schedule, and

URS added crews and support personnel and performed work out of sequence to accommodate the accelerated schedule for completion of the H2 ventilation system.

190. Although DOE has acknowledged responsibility and has paid URS for extra work crews related to this acceleration, it has not compensated URS for the impact of performing the enclosure and ventilation system work out of sequence. Specifically, URS was forced to defer certain scheduled tasks until after start-up of the H2 ventilation system. For example, URS planned to install the openings for airlocks in the H2 enclosure approximately three weeks prior to start-up of the H2 ventilation system. Instead, URS had to completely enclose the H2 structure in order to conduct start-up and testing to meet the February 28, 2013 deadline. URS then had to redo portions of the enclosure to install the airlocks after the DOE-EPA Consent Order milestone was reached. Performing work out of sequence rather than in accordance with "specific methods" chosen by URS in order to comply with DOE's direction resulted in rework and inefficiencies, and ultimately delayed completion of the H2 enclosure.

C. Extra-Contractual Changes To The Enclosures Caused Critical Path Delays And Increased URS's Cost Of Performance

191. DOE's extra-contractual changes, breach of its express and implied duties, and interference with URS's right to determine the specific method for constructing the enclosures increased the cost of performance. In addition, DOE's changes to the H2 enclosure and inefficiencies caused by the twenty-five-foot exclusion zone imposed as a result of hillside instability caused sixty-two days of critical path delay.

192. DOE reimbursed URS for a portion of these costs, and URS is entitled to be reimbursed the balance.

VI. DOE-ORDERED CHANGES INCREASED THE COSTS OF SLUDGE DISPOSAL AND REMOVAL

193. Removal of radioactive waste material, or sludge, was a significant element of URS's remediation of the SPRU site. At the time DOE and URS agreed to Modification 35, URS already had made significant progress on the sludge removal operations, and the parties understood that the remaining work could be completed quickly once work resumed.

194. But the additional NESHAP permitting requirements and hillside remediation delayed sludge processing and removal for two years. During this period of delay, for which DOE was responsible, significant components of the previously installed Sludge Retrieval and Solidification System ("SRSS") failed, including the circulation pumps that kept the sludge suspended. After work was finally able to resume, URS had to replace the system and repeat tasks it had previously completed, such as re-circulating the sludge to ensure a suitable waste profile, increasing URS's costs.

A. Sludge Operations At SPRU Prior To Modification 35

195. When URS began work under the Task Order, seven inactive storage tanks in the Building H2 tank farm contained waste generated from nuclear fuel reprocessing and separations testing at SPRU. The waste consisted primarily of water and sludge containing various radionuclides, as well as small amounts of mercury, lead, and chromium.

196. URS subcontracted with Energy Solutions to design and operate the SRSS to retrieve waste from the underground storage tanks, solidify it, and dispose of it off-site.

197. Prior to the September 2010 contamination incident, URS had consolidated the sludge into one tank, Tank 509E, where two pumps circulated the sludge to prevent it from settling. Keeping the sludge properly circulated was essential to ensuring that it was distributed evenly and that the resulting waste profile met the criteria to allow for disposal off-site. After

receiving permission from DOE to proceed, URS and Energy Solutions planned to remove the sludge from Tank 509E and mix it with stabilizing agents and cement to create solidified waste suitable for transport to off-site disposal.

B. Modification 35 Recognized That Sludge Work Was Near-Complete And Would Resume Following Discrete Process And Equipment Improvements

198. The IRP contemplated that URS would resume sludge removal on March 21, 2011 and complete it by June 20, 2011.

199. The IRP recognized that "[t]he design and installation of the sludge solidification system is complete," and "[o]perations were well underway when invasive work was suspended as a result of the [September 29, 2010] contamination event." The IRP expressly stated that the only work required when operations resumed was (1) to "[c]omplete actions resulting from a [Consolidated Hazard Analysis Process] of the installed sludge solidification system"—improvements to reduce the risk of leaks from the system; (2) "[s]olidification of consolidated sludge in Tank 509E;" (3) "[s]hipment of solidified material;" (4) "[c]leanup of Tank 509E after solidification of consolidated sludge;" and (5) "[r]emoval of residual contamination in the vaults."

200. Like the IRP, Modification 35 in Sections C.10.2 and C.10.3 provided that URS would proceed quickly with "decontamination of the sludge processing general area" and making "[i]mprovements to the sludge processing system" to "reduce the possibility of further leakage." Modification 35 anticipated that URS would perform this work in parallel with enclosure construction, prior to DOE issuing a Notice to Proceed for demolition operations. Specifically, Modification 35, Section C.10.3 provided that the activities "will occur during the [Recovery Act Readiness Evaluation] period and prior to DOE issuing a Notice to Proceed for demolition operations, or sludge processing operations."

201. Under Modification 35, Section C.10.3, sludge removal would then commence upon DOE's issuance of a Notice to Proceed.

C. DOE's Imposition Of NESHAP Permitting Requirement And Orders To Remediate Hillside Instability Delayed Sludge Removal And Disposal

202. As discussed above, the imposition of a NESHAP permitting requirement for the enclosures and PVUs after execution of Modification 35 effectively halted planned work, including sludge work.

203. On December 14, 2012, DOE informed URS, in a letter copying DOE's contracting officer, that URS could not perform any intrusive D&D until the H2 tent enclosure and ventilation system were completed. This direction, combined with the delays caused by the NESHAP permitting requirement and hillside instability, prevented URS from beginning the sludge processing work until May 2013, when DOE finally considered the H2 enclosure and ventilation system to be complete. In sum, the NESHAP permitting requirements and remediation of the hillside instability delayed sludge removal for two years.

D. Delays In Sludge Removal And Disposal Led To System Failures And Increased Costs

204. During this lengthy delay, the circulation pumps in Tank 509E failed, causing the sludge to settle in the tank and to no longer be ready for removal.

205. As a result, the steps agreed to in Modification 35 for completing sludge removal, including using the existing SRSS, were no longer viable. Following the pump failure, DOE, URS, and Energy Solutions met to address these issues and how to proceed. Because the pumps had failed, URS was required to install new mixing pumps to re-circulate the waste and re-suspend the radionuclide particles, a difficult process that required extensive modeling and planning. Further, the delay exposed elements of the SRSS to continued contamination over an extended period, compromising their utility. To resume sludge removal activities, it proved

more cost-effective to replace the entire system than to modify, repair, and re-commission the existing system.

206. The requirement to implement and engineer these new systems, re-suspend the sludge, and coordinate with DOE caused URS to incur activity-related costs. URS's activity-related costs were further increased by the need to have its subcontractor, Energy Solutions, address the complex issues posed by contaminated equipment and stratified nuclear waste.

VII. DOE'S DELAYS INCREASED WATER DISPOSAL COSTS

207. Water management constituted a significant portion of URS's responsibilities at SPRU. Given SPRU's proximity to the Mohawk River, URS had to implement measures to ensure that groundwater on the SPRU site that came in contact with contaminated areas was collected, characterized for level of contamination, treated, and properly disposed.

208. Radiologically contaminated water had to be sent to a specialized facility at significant expense. The parties contemplated that groundwater containing only volatile organic compound ("VOC") contamination did not need to be sent to such a facility. Rather, the parties planned for URS to send such water to the less costly DuPont Chamber Works ("DuPont") treatment facility, but DOE unreasonably delayed issuing its formal approval for URS to do so. Pending DOE's approval, URS had to send VOC-contaminated water to the more expensive radiological treatment facility.

A. Prior To Entering Into Modification 35, URS And DOE Developed A Plan To Dispose Water At The DuPont Facility

209. Originally, water from SPRU's groundwater collection system was discharged into the Mohawk River after on-site treatment. However, after discovering that the groundwater contained small amounts of VOCs, DOE directed URS on October 29, 2010 to cease discharging water from the SPRU site into the river.

210. On November 9, 2010, URS submitted a request to ship the collected water to the DuPont facility. One month after URS's initial request, on December 9, 2010, DOE-SPRU finally contacted officials at DOE Headquarters, advising them of the need to move forward with disposing of water at the DuPont facility. On December 10, 2010, DOE Headquarters informed DOE-SPRU that URS was required to perform a dose assessment to develop authorized concentrations. DOE-SPRU located guidance regarding how to perform the dose assessment and forwarded this guidance to URS on December 14, 2010.

211. On January 10, 2011, URS submitted its Dose Estimate for Unrestricted Release of Water at Chambers Works ("Dose Estimate") to DOE-SPRU, providing a radiological engineering calculation to support the proposal to ship treated water to DuPont for disposal.

212. URS updated and re-submitted the Dose Estimate three times—on January 13, February 9, and February 11, 2011—to address comments provided by DOE.

213. On February 9, 2011, shortly after the parties signed Modification 35 and the same day DOE received URS's third Dose Estimate, DOE-SPRU represented that the only further authorization needed was from DOE Headquarters; that DOE Headquarters "have indicated that they support this release assessment, with the minor changes URS [was] currently making;" and that DOE-SPRU "[did not] anticipate any problems" with obtaining approval from DOE Headquarters.

B. Modification 35 Reflected The Parties' Operating Assumption That Water Would Be Treated And Released At The DuPont Facility

214. Because the parties had been working for three months to develop the plan to ship water to DuPont for treatment and discharge in the leadup to Modification 35, URS included this approach in the IRP. The IRP provided that "[e]xcavation water removed from Buildings G2 and H2 can be treated onsite for free release disposal at the Dupont facility in New Jersey."

215. It further provided that "[t]he U.S. Department of Energy, Office of Environmental Management (DOE-EM) and KAPL (NR) approval process and cycle times will involve a two-week turnaround for each submittal in the first month of resumed operations and a one-week turnaround thereafter." This two-week turnaround time was a reasonable timeline for the initial approval process, especially given that, at the time the parties entered Modification 35, URS had already submitted two drafts of its Dose Estimate and received comments from DOE.

216. Table H.902 of Modification 35 reflects the IRP's approach by providing that, as a GFS/I, a Government Furnished Service and Item, "DOE will pursue the authorized release of treated water to off-site disposal."

C. DOE Failed To Cooperate In Timely Approving The Use Of The DuPont Facility, Increasing URS's Costs

217. Based on DOE's representations and the requirements of Modification 35, URS reasonably anticipated that DOE would approve the Dose Estimate and its plan to dispose of water at DuPont within two weeks after it formally submitted the Dose Estimate. Instead, DOE significantly delayed the process.

218. On February 11, 2011, URS submitted its fourth Dose Estimate to DOE, having responded already to three sets of DOE comments.

219. On February 15, 2011, Christine Gelles of DOE-EM circulated a draft memorandum proposing that EM consent to the Dose Estimate and providing minor comments. The language of the draft memorandum borrowed substantially from URS's Dose Estimate. URS provided responses to these remaining comments on February 22, 2011.

220. DOE-EM substantially incorporated URS's comments, but then—inexplicably—did not formally approve the memorandum until three weeks later, on March 14, 2011. Then, despite DOE-EM and DOE-SPRU approval—not to mention the months of prior review and

sign-off by DOE personnel—DOE-EM and DOE-SPRU still did not submit the approval to DOE Headquarters until March 31, 2011, another two weeks later. DOE Headquarters issued its approval without comment on April 11, 2011, and URS was notified of DOE Headquarters' approval on April 12, 2011.

221. As a result of DOE's unreasonable delay, instead of receiving final approval within two weeks of formally submitting the revised Dose Estimate—by February 25, 2011—URS did not receive approval until April 12, 2011.

222. During this delay, the capacity of the onsite water storage tanks was repeatedly exceeded, and URS was forced to dispose of the excess water at the more expensive Perma-Fix facility in Richland, Washington. Given the extensive back-and-forth, URS's repeated pressing of DOE to approve the plan, and DOE's knowledge that URS had to use a more expensive disposal option until the plan was approved, DOE knew that any delay would cause increased costs.

223. While URS would have been able to ship water for disposal to DuPont at a cost of $0.80 per gallon, URS instead had to ship 170,000 gallons of water for disposal to Perma-Fix at $10.75 per gallon, causing URS to incur additional activity-related costs.

VIII. DOE DIRECTED URS TO PREPARE THREE MORE BASELINES THAN THE CONTRACT REQUIRED, BUT PAID URS ONLY FOR ONE

A. DOE Ordered URS To Prepare Three Baselines Not Required By Modification 35

224. Modification 35 required URS to prepare only one baseline. Specifically, Section H.900 provides:

> The Contractor shall provide a comprehensive, resource loaded schedule, including man hours, material costs, and labor costs for both the prime contractor and any subcontractors, on a monthly basis. The schedule shall be consistent with the work package level and must include milestones, identification of the critical path, float, expected GFSI (Government Furnished Services and Items), and work-around

plans to mitigate the impact of activities or assumptions considered to be a significant risk to project cost or on-time completion.

225. However, DOE ordered URS to prepare three additional baselines.

1. DOE Ordered URS To Prepare BCP 124

226. On February 11, 2011, DOE directed URS to issue a "baseline plan . . . consistent with" Modification 35. URS proposed to submit the baseline on March 11, 2011. URS submitted this baseline, Baseline Change Proposal ("BCP") 124, to DOE on the deadline of March 11, 2011. BCP 124 reflected the schedule agreed upon in Modification 35 and was consistent with the requirements in Modification 35, but DOE refused to approve it.

2. DOE Ordered URS To Prepare BCP 133 To Account For The New NESHAP Permitting Requirement

227. On February 21, 2011, after URS first learned of the NESHAP permitting requirement, URS wrote to DOE's contracting officer, stating that "DOE-SPRU verbally requested [URS] to address the potential impact of providing for a 60-day period for the review and approval by the Environmental Protection Agency (EPA) of NESHAP evaluations related to enclosure designs." URS advised: "[URS] will be pleased to provide an analysis of the potential impact of this new EPA activity on cost and schedule. However, it will not be reflected in the revised Plan absent the written direction of the DOE Contracting Officer and appropriate modification of the contract/order."

228. On March 7, 2011, two weeks after URS reminded DOE that it could not revise the baseline to incorporate NESHAP impacts absent contracting officer direction and four days before the original baseline was due, DOE's contracting officer ordered URS to obtain NESHAP pre-construction permits for the H2 and G2 enclosures and ventilation systems and instructed that URS "shall include this direction into the revised baseline and submit it to DOE by March 11, 2011."

229. Preparing a baseline takes a significant amount of time, and it was impossible for URS to incorporate the substantial impacts of DOE's direction to obtain NESHAP permits in the four days between March 7, 2011, when URS received the direction, and March 11, 2011, when the original baseline was due.

230. On April 6, 2011, DOE directed URS to submit a new baseline "incorporating NESHAPS and other impacts." On May 23, 2011, URS submitted BCP 133 to comply with DOE's March 7, 2011 and April 6, 2011 directions. BCP 133 consisted of 1,166 pages of supporting information and data. Changes were tracked, or "cross-walked," back to BCP 124, the Modification 35 baseline. Nonetheless, BCP 133 was also never approved by DOE.

3. DOE Ordered URS To Prepare BCP 154 To Account For Impacts Of Hillside Instability

231. On June 8, 2012, DOE's contracting officer directed URS to prepare yet another baseline to account for the contract modifications that had been issued—most notably for those related to hillside instability. URS submitted this third baseline on September 10, 2012, and submitted a revised version, BCP 154, responding to DOE feedback on October 5, 2012. DOE reimbursed URS for the costs of developing BCP 154. However, DOE still refused to approve BCP 154.

232. On December 27, 2012, DOE provided further comments on BCP 154. But by the time the comments were received, BCP 154 was no longer relevant. Among other things, in December 2012, DOE provided a Notice to Proceed, while it simultaneously precluded URS from proceeding with any intrusive D&D in the G2 building until after completion of the H2 enclosure and ventilation system.

4. DOE Ordered URS To Prepare BCP 178 To Account For Impacts Of Other Changes To Project And DOE-Caused Delays

233. In a February 14, 2013 letter, URS advised DOE's contracting officer that, due to changed conditions from DOE deferring the initiation of intrusive D&D work, it would make changes to BCP 154 in February and March. URS stated that the parties' ultimate goal should be to resolve contractual, funding, and technical issues before revising the baseline again.

234. Despite the significant delays to the critical path that occurred after submittal of BCP 154 and persistent unresolved contractual, funding, and technical issues, on July 24, 2013, in a letter copying the contracting officer, DOE directed URS to provide a revised baseline to "provide a realistic schedule of performance of the task order work."

235. URS responded on July 31, 2013, in a letter to DOE's contracting officer, stating that this direction "is not consistent with the previous agreements between DOE and URS to first resolve contractual, funding, and technical issues prior to development of a new baseline," and outlining the significant outstanding issues. URS also advised DOE's contracting officer that this direction was a change to the contract, and that all allowable costs would be reimbursable. However, DOE still failed to address the outstanding contractual, funding, and technical issues; as a result, URS had to repeatedly re-sequence work—and not perform work in the most efficient order—to avoid doing work for which it was awaiting direction. But instead of providing the necessary contractual, funding, and technical direction that would enable URS to both perform project work efficiently and maintain a project schedule, DOE breached its contractual duties to use its best efforts to cooperate with URS and to facilitate URS's performance.

236. As a result of DOE's failure to address the outstanding issues and due to changed conditions related to the Notice to Proceed, BCP 154 no longer reflected the project's actual status, and URS ceased providing performance data against BCP 154 in January 2014. URS was

instead forced to develop an interim baseline that it used to track costs internally and inform its monthly reports to DOE.

237. On April 8, 2014, in a letter copying DOE's contracting officer, DOE directed URS to provide the "new baseline" that URS was "using in the monthly reporting." On April 15, 2014, URS responded in a letter to DOE's contracting officer that it would only submit "a new baseline incorporating life-cycle costs and schedule estimates" once the outstanding technical issues were resolved. However, URS agreed to comply with DOE's order and provide "an interim project baseline extending through the end of December 2014" "based on a limited subset of project activities."

238. URS submitted the interim baseline to DOE as BCP 178 on April 29 (the schedule) and May 2, 2014 (as a Primavera software, or ".xer" file).

B. URS Was Not Reimbursed For Two Baselines It Was Required To Create

239. URS was compensated for developing BCP 124. DOE also compensated URS for its costs in developing BCP 154, recognizing that the preparation of additional baselines was outside the scope of Modification 35 and constituted a change. However, URS has incurred unreimbursed activity-related costs related to the preparation of BCPs 133 and 178.

IX. URS WAS FACED WITH MATERIALLY DIFFERENT SITE CONDITIONS AND PRE-EXISTING CONDITIONS FOR WHICH IT HAD NOT ASSUMED THE RISK

A. URS Discovered Numerous Differing Site Conditions And Pre-Existing Conditions After Signing Modification 35

240. In performing work under Modification 35, URS encountered conditions throughout the SPRU site that it reasonably had not anticipated and that demonstrated the inaccuracy of the parties' key assumption that the HSA was accurate and generally represented the extent of contamination on the site.

241. On March 13, 2014, URS resumed critical path decontamination and characterization of Buildings H2 and G2 after construction of the Buildings H2 and G2 enclosures was complete. Its daily work almost immediately began to be affected—and was continually affected thereafter—by the inaccurate nature of the HSA. Since April 2014, URS provided DOE with over two dozen notices of differing site conditions or pre-existing conditions.

242. The number and nature of differing site conditions or pre-existing conditions encountered by URS caused a fundamental shift in the project. In light of the volume of site conditions that were materially different from those set forth in the HSA, URS could no longer operate under the assumption that the HSA was accurate. Instead, URS had to perform characterization as if the site had never been previously surveyed rather than as "a matter of routine" as DOE had indicated.

243. For example, URS reasonably expected that equipment in Building G2 Cell 5, including large pieces of equipment called mixer-settlers, would not pose difficulties because the HSA states that the equipment had been drained. But in July 2014, URS determined that there was liquid and/or sludge in most of the weirs in the mixer-settlers, contrary to the HSA's statement. Because URS did not expect to find any liquid or sludge, it had to properly characterize and dispose of the equipment, which required significant extra effort, expense, and time.

244. URS's efforts to determine the nature and source of the liquid and sludge in the Building G2 Cell 5 mixer-settlers were further complicated because of inaccuracies in the HSA's description of the piping and tanks in Building G2 Cell 5. URS discovered that the piping and tanks had been modified or deteriorated, observing cut, re-plumbed, hand bent, and otherwise

modified tubing and piping. These conditions were inconsistent with the HSA, which indicated that the piping and tanks in the Building G2 cells, including Cell 5, "show[ed] no signs of damage or deterioration[, and n]o evidence of deterioration of piping insulation."

245. Modification 35 accounted for the possibility of differences between the site and the conditions described in the HSA, and squarely placed the risk of such differences on DOE through the differing site conditions clause. In addition, Modification 35 squarely placed on DOE the risk of pre-existing conditions for which URS has not assumed the risk under the terms of the Task Order.

246. In some limited cases, DOE recognized its contractual responsibilities and issued Task Order modifications addressing the differing site conditions or pre-existing conditions and paid URS to perform additional work to account for those conditions. However, in other cases, including in those instances described in paragraphs 247 through 344, no modification was issued.

B. Unanticipated Mixer-Settler In Building G2 Cell 3 Increased URS's Costs

247. The HSA plainly states that a mixer-settler in Cell 3 of Building G2 was removed in 1954, decades before URS arrived on site. Table 6-4 of the HSA, the "Building G2 Decommissioning Activities Summary," states that the "Cells No. 3 and 4 mixer/settlers [were] removed" in 1954. Section 7.4.1 of the HSA, "Cell Area – Information Common to Cells," states again: "Documentation indicates that the Cell Nos. 3 and 4 mixer settlers . . . were removed."

248. Given the HSA's clear statements that the mixer-settler in Cell 3 had been removed, and Modification 35's instructions that URS should rely upon the HSA, URS proceeded with its planning, budgeting, and characterization efforts under the belief that the Cell

3 mixer-settler had, in fact, been removed. URS therefore did not anticipate needing to address a significant piece of highly contaminated equipment.

249. However, URS discovered during its work after signing Modification 35 that the mixer-settler in Cell 3 had *not* been removed. The mixer-settler, which was located at the highest level in Cell 3, was visible only by climbing two ladders to the upper elevation. The scope of the original Task Order and the parties' operating assumption about the comprehensive nature of the HSA made a detailed inspection of every component in Buildings G2 and H2 unnecessary prior to the execution of Modification 35, and URS neither realized nor had reason to suspect that the HSA contained mistakes of this magnitude prior to entering into Modification 35.

250. The mixer-settler's unexpected presence required URS to change its planned work and incur increased costs beyond what it had reasonably anticipated in determining the Modification 35 cost and schedule. Specifically, URS had to expend resources characterizing the contamination of the equipment; spend time disassembling and removing the mixer-settler; and manage additional waste volume. URS incurred activity-related costs in removing the contaminated equipment it had been told was already removed.

251. On September 19, 2014, URS submitted to DOE's contracting officer a notice of a differing site condition or pre-existing condition regarding the mixer-settler in Cell 3. In its April 16, 2015 response, DOE's contracting officer "agree[d] that the HSA consistently refers to removal of the Cell #3 Mixer Settler in several places," but did not grant URS an equitable adjustment.

C. Unanticipated Contaminated Roof Header Vent In The Building G2 Roof Increased URS's Costs

252. When URS was characterizing Building G2 following execution of Modification 35, it discovered that a piping system with vessel vents was embedded in the Building G2 roof (the "Building G2 roof header vent"). The Building G2 roof header vent penetrated the roof at multiple locations and was highly contaminated.

253. URS first became aware of the Building G2 roof header vent in late 2011 and early 2012—months after Modification 35 was signed—when fabric was being installed for the Building G2 enclosure. When URS later cut into the piping, it discovered internal contamination, indicating that the pipes had not been flushed properly. Although Section 7 of the HSA devoted an entire section to the Building G2 roof, it made no mention of the roof header vent. Nor do any of the HSA photographs of the Building G2 roof show or indicate the presence of the roof header vent.

254. The Building G2 roof header vent was not reasonably observable; it was not visible from the ground and could only been seen by accessing the roof via a man lift. URS's pre-2010 incident characterization efforts reasonably neither identified the presence of the Building G2 roof header vent nor characterized the associated contamination inventory.

255. URS's post-Modification 35 characterization efforts ultimately determined that the Building G2 roof header vent's alpha contamination was over two times higher than even those areas considered to be high contamination areas. In addition, the contamination differed significantly from that found in the cell piping elsewhere in Building G2, indicating that the Building G2 roof header vent piping had not been flushed. When URS executed Modification 35, it had no reason to anticipate encountering or having to address the type or level of

contamination found in the Building G2 roof header vent, particularly since URS had no reason to know that the vent even existed.

256. On October 1, 2015, URS notified DOE's contracting officer that the presence of contamination in the Building G2 roof header vent constituted a differing site condition or pre-existing condition. On February 24, 2016, the contracting officer denied URS entitlement to costs associated with the roof header vent.

257. As a result of this unexpected contamination, URS had to expend time and effort—which was not accounted for in the Modification 35 schedule or budget—characterizing, decontaminating, and removing the Building G2 roof header vent, a process that was difficult and time-consuming, given the system's high contamination and precarious location. URS incurred activity-related costs to remove the contaminated roof header vent that it had no reason to suspect existed.

D. Significant Amounts Of Unanticipated Contaminated Lead In The Building H2 319-Foot Level Pipe Trench Increased Costs And Caused Delays

258. In 2014, URS identified an unanticipated pipe trench at the 319-foot level in Building H2. The pipe trench was lined with stainless steel and lead shielding, indicating the piping contained high levels of radioactive materials. Ultimately, URS had to dispose of over 100,000 pounds of unanticipated contaminated lead from the pipe trench, resulting in unanticipated clean-up and delay costs.

259. Although the HSA dedicated an entire section (Section 8.2) to the level of Building H2 referred to as the "319-Foot Level" and also identified other locations in Buildings H2, G2 and the tunnels containing lead, it did not identify or provide any indication that there was a pipe trench at the 319-foot level, let alone one containing significant amounts of lead shielding or contaminated lead. The maps and floor plans of Building H2 and the 319-foot level

that were in URS's possession at the time of Modification 35's execution likewise do not depict the trench. Indeed, DOE's contracting officer previously acknowledged that "[the HSA] does not appear to describe the pipe trench in the first volume." Because URS reasonably relied on the HSA, it had no reason to suspect or plan for such features at the 319-foot level, especially in light of the fact that the HSA specifically referenced other locations where lead was located.

260. The HSA's specific identification of other locations in Building H2 with lead aligned with its generalized statement that "[l]ead shielding is abundant in the SPRU facilities," but did not put URS on notice that there were large volumes of hidden contaminated lead shielding in a location that the HSA did *not* identify as having lead.

261. URS reasonably did not discover the lead-filled pipe trench in its limited characterization efforts before entering into Modification 35 because it was hidden from view under floor tiles and bricks in an out-of-the-way area that URS had no reason to excavate prior to Modification 35. Nor was URS permitted to do more extensive inspections of this area between the September 2010 contamination incident and the signing of Modification 35.

262. URS reasonably relied on the HSA's description of the Building H2 319-foot level and its lack of indication of a pipe trench containing significant amounts of contaminated lead when determining the amount of contaminated lead in Building H2 and crafting its cost and schedule estimates that formed the basis of Modification 35. URS reasonably believed that its Modification 35 estimate accounted for all references to lead in the HSA.

263. Following discovery of the lead-filled pipe trench, on November 5, 2014, URS notified DOE's contracting officer that the pipe trench constituted a differing site condition or pre-existing condition. On January 28, 2015, DOE's contracting officer denied URS's request for an equitable adjustment.

264. On October 19, 2015, once URS conducted further clean-up and characterization work at the 319-foot level, URS sent an updated notice of differing site condition or pre-existing condition, requesting that DOE reconsider its prior denial. DOE again denied URS's request on February 4, 2016.

265. Ultimately, URS had to dispose of the large and unexpected quantities of contaminated lead in a manner that was time-consuming, challenging, and expensive. Because of the contaminated lead's location, URS personnel had to hand-carry sheets of lead, often weighing over 100 pounds each, from the 319-foot level to the ground floor for disposal. Some of the lead was located between a steel trench liner and a concrete slab, and could be removed only after the trench and slab were demolished. To prevent the commingling of hazardous lead with nonhazardous demolition debris, URS had to drill holes in the trench walls prior to demolition and pour in dye to stain the lead. Once the trench was demolished, the dyed lead was separated for disposal. To properly manage the lead disposal, URS also had to utilize specific personnel and implement safety programs, including a medical surveillance program for the workers handling lead.

266. URS incurred unanticipated activity- and delay- related costs attributable to the presence of the contaminated lead in the Building H2 319-foot elevation pipe trench.

E. Unanticipated Mercury Contamination Increased Costs And Caused Delays

267. Between 1950 and 1954, the SPRU facilities and KAPL laboratories managed liquid waste using drain lines leading to Building H2.

268. According to Sections 6.2 and 6.3 of the HSA, following the decommissioning of the SPRU facilities, pipes and equipment were generally drained and flushed with nitric acid and water for decontamination. The HSA also indicated that the Building H2 tanks and lines had been flushed of contaminants during extensive remediation efforts after the SPRU facilities were

decommissioned. The HSA further indicated that seepage from the G2/H2 Tunnel "was not known to occur and watermarks were not attributed to tunnel pipe leaks . . . ." Accordingly, URS reasonably did not expect to find mercury in significant quantities in those locations.

269. URS ultimately identified much more mercury contamination in Building H2 than was referenced in the HSA or known at the time Modification 35 was executed.

270. On March 31, 2015, URS detected extensive mercury contamination near the Building H2 319-foot level pipe trench (which itself was not indicated in the HSA). URS continued to detect additional mercury in and around this pipe trench through mid-April 2015.

271. Later, in May 2016, when URS opened the piping and tubing in the H2 Pipe Tunnel and Cell 2, it found widespread elevated mercury, indicating either that the piping and tubing had not been flushed or that mercury had been added—perhaps through leaks—after the decontamination efforts described in the HSA.

272. Because the HSA specifically identified the presence of mercury in certain locations, including the H2 tank vaults, but did not identify or indicate the presence of mercury elsewhere in Building H2 or the H2 Pipe Tunnel, URS did not plan to address such contamination as part of its scope of work. URS developed the Modification 35 schedule and budget based on the SPRU operations' history as described in detail in the HSA, as it was directed to do. The unexpected mercury contamination directly impacted URS's cost and schedule.

273. The unexpected discovery of significant mercury contamination in H2 caused three extended work-stoppages while URS completed a full characterization and then undertook an extensive cleaning process to eliminate the mercury.

274. URS incurred activity- and delay-related costs as a result of the unanticipated mercury contamination. URS notified DOE's contracting officer on June 29, 2016 that the presence of mercury constituted a differing site condition or a pre-existing condition. On August 18, 2016, the contracting officer denied URS's entitlement to an equitable adjustment.

F. Unanticipated Water Leak Increased Costs

275. URS was responsible for the collection and disposal of contaminated groundwater on the SPRU site.

276. Section C.2.3 of Modification 35 provides a range of volumes of groundwater collected based on historical data, but after executing Modification 35, URS observed higher-than-expected volumes of groundwater. URS investigated possible sources for the excess water and ultimately discovered an actively leaking storm line from the KAPL site. Upon information and belief, these leaks caused or substantially contributed to the unexpected water volume at the SPRU site, increasing URS's water management and disposal costs beyond what it reasonably anticipated.

1. URS Based Its Expectations For Water Collection On Contract Documents

277. The Task Order and Modification 35 incorporated the RCRA Facility Investigation Report for Groundwater (the "RCRA Groundwater Report") as one of the "Exhibit D SPRU Project Applicable Documents."

278. The RCRA Groundwater Report notes that leaks in the KAPL storm water piping were identified in 2003. However, the RCRA Groundwater Report also indicated that these leaks had been repaired in May 2005 in order "[t]o eliminate" storm water leakage.

279. Based on the RCRA Groundwater Report, which was included in Modification 35, URS reasonably assumed, at the time it signed Modification 35, that the storm water line leaks had been eliminated and would not contribute additional water flow to SPRU.

280. Further, Modification 35, Section C.2.3 indicates a range of volumes of groundwater collected based on historical data, stating: "The Hillside Drain collection system collects water infiltrating into the foundation area using footer drains installed around Building H2 and tank enclosure. Quantities have ranged from 75,000 to 125,000 gallons per year in the past. Demolition activities may result in changes in volume."

2. URS Raised Concerns About Excess Water To DOE

281. Shortly after the execution of Modification 35, URS began to observe large water volumes—in excess of 125,000 gallons per year—that were both (1) not proportionate or correlated to variations in precipitation and (2) inconsistent with the parties' shared expectations about the anticipated amount of water to be collected during the project, as reflected in Section C.2.3 of Modification 35.

282. URS raised the issue of elevated water collection rates to DOE in 2011. A possible fire main break on the KAPL site was suspected, and DOE agreed to investigate the issue (through KAPL) and to check with KAPL's landlord, the Naval Reactors Laboratory Field Office ("NR"), on the issue as well. In October 2011, DOE committed to asking NR about the status of the suspected fire main break and any other evaluations it had performed on the issue. URS has no record that either DOE or KAPL responded to URS's 2011 information requests regarding excess water and potential leaks.

283. URS raised the matter again in April 2013, noting that "[p]otential [w]ater [i]nfiltration from the KAPL Site" was a "[s]ignificant [i]ssue[] [p]reviously [d]iscussed with DOE that require[d] resolution."

284. URS raised the issue yet again in August 2014, after smelling chlorine in an area of excess water on the site. URS questioned whether a KAPL system adjacent to Building G2 used chlorinated water, and, if so, whether it had any known leaks. URS stated that it believed "that the KAPL site [was] contributing up to 75,000 gallons per year to the ground water collected and disposed of at" Building H2. URS explained that "[t]he water comes from surface water over land flow apparently resulting from plugged or restricted drains, overflow of existing barriers, and possible fire main/water main leaks on the KAPL site."

285. DOE-EM agreed to (1) inform KAPL that "EM expects KAPL to stop further surface water flow onto the SPRU work-site from KAPL Property and request that KAPL provide a schedule when the surface water diversion would be completed," and (2) "[r]equest that KAPL investigate whether sub surface flow/infiltration is occurring from the KAPL property to the SPRU work site, causing additional water to be treated/disposed [and] [r]equest that KAPL provide a schedule when this will be completed."

286. URS also notified DOE's contracting officer on October 7, 2014 that it considered the excess groundwater, which URS believed to be associated with a fire water main leak flowing to the SPRU site, to be a change to Modification 35. In this letter, URS noted that test strips showed the presence of chlorine in some of the groundwater, thus indicating the water came from the KAPL site and was not natural groundwater.

287. Upon information and belief, DOE failed to use its best efforts to cooperate with URS by having KAPL stop further surface water flow onto the SPRU site and investigate subsurface flow, as it was required to do under the contract. Instead, DOE appears to have gone through the motions, making requests on paper to NR that it never pursued in any meaningful way.

288. On April 20, 2017, URS again notified DOE, in a letter copying DOE's contracting officer, that it had collected increased volumes of water that were out of proportion with the rainfall at the site. URS explained that it was "currently investigating the possibility of water intrusion in order to definitively confirm and mitigate the possible source(s) of the elevated water volumes." URS sought DOE's cooperation to facilitate exploration and testing on the KAPL site to identify the origins of this water, including to determine whether the water infiltration may have come from a leak in the storm sewer or firewater main, and suggesting conducting a tracer test to detect a leak, or, alternatively, requesting that KAPL provide current test and inspection data that supported the absence of leaks. Rather than use its best efforts to cooperate with URS, DOE insisted that URS provide comparison data over a longer period of time, in an attempt to blame the elevated water collection rates on precipitation.

289. During a meeting between DOE and URS the following week, URS again reiterated its concern about excess water and its request for DOE support for an investigation into potential sources. However, DOE indicated it was not prepared to act on the request, and, to URS's surprise, stated that the storm water drain system at the site had been leaking for years.

290. Following the in-person meeting, URS promptly provided the additional requested comparison data, and noted that the varying annual precipitation data over the preceding ten years could not be correlated with the water collected in the H2 footer drain. URS again requested that DOE and KAPL actively support an investigation into potential water infiltration. DOE rejected URS's request to investigate a potential leak using a tracer, saying it would only support video camera inspection and other techniques.

3. URS Identified Leak In KAPL Water Line

291. On March 1, 2018, as part of planned work, URS personnel exposed a portion of the KAPL storm water line between the SPRU and KAPL sites—the same portion of the line

where the RCRA Groundwater Report indicated a historic leak had been repaired by relining the storm water lines; URS found that the water line was leaking water into the H2 excavation area. Subsequently, contract personnel discovered two other leaking storm water joints.

292. URS personnel took photographs and video of the leaking areas, and provided this information and a notice of differing site condition or pre-existing condition to DOE's contracting officer on March 20, 2018. Specifically, URS stated that "[a]ny water leaking from this pipe has directly contributed to an increase in water volumes in both the H2 basement and H2 hillside sump that URS has had to treat as part of the SPRU demolition activities, and is a differing site condition under Modification 35." On May 18, 2018, DOE's contracting officer denied the existence of a differing site condition or pre-existing condition.

293. Upon information and belief, the KAPL portion of the site had been leaking into the SPRU site since work began on Modification 35. In 2018, URS performed studies analyzing groundwater flow, precipitation, and hillside sump water volume over time, in an effort to estimate the amount of water reasonably attributable to the water leak. Based on URS's analysis, water volumes varied with precipitation amounts from 1983 through 1996. This changed in 1996, when hillside volumes began to progressively increase. There was no evidence of a reduction in sump water volumes following the repair in 2005. The data suggest that the storm water pipe systems began to leak in 1996, and that the 2005 repair was ineffective.

4. The Leak Caused Unexpected Additional Costs

294. Because of the water leak, URS was required to expend personnel time and other resources collecting, storing, shipping, and treating excess water volumes. URS incurred unreimbursed activity-related costs for excess water management and disposal.

G. Unanticipated Contamination In Buildings H2 And G2 Required Additional Scabbling that Increased Costs And Caused Delays

295. Under Modification 35, URS was required to erect enclosures over Buildings G2 and H2 and to perform certain decontamination efforts under the enclosures. URS could remove these enclosures to conduct "open-air" demolition only when the remaining facilities were sufficiently decontaminated to meet certain contractual and regulatory requirements.

296. Based on Modification 35's specific requirements for contamination levels prior to demolition and the contamination data in the HSA, URS anticipated that the loose and fixed contamination in concrete was sufficiently low that it would have to "scabble"—remove a thin layer of concrete from a structure, typically by machine—*at most* one-quarter inch of concrete in Buildings G2 and H2. URS later discovered that the contamination level was higher and had leached far deeper into the concrete than URS knew or reasonably should have anticipated based on the HSA and URS's limited pre-Modification 35 characterization.

297. As a result of this unexpected and reasonably unforeseeable contamination, URS was required to perform more extensive and more expensive scabbling and other decontamination than it reasonably anticipated at the time Modification 35 was negotiated and executed.

1. Modification 35's Requirements For Decontamination

298. Modification 35 provided specific requirements for appropriate contamination levels before open-air demolition. Section C.10.4 of Modification 35 provided two steps for open air demolition. First, while in the enclosures, URS was required to reduce loose and surface contamination to specified levels. Second, after meeting those levels, URS could "either continue decontamination" within the enclosures, or "apply fixatives." URS could then demolish the structure "without an enclosure[] once loose contamination levels are reduced to" specified,

lower levels. The levels of loose contamination were to be "evaluated by taking over a one meter square area using a maselin cloth on the exposed surface." The original Task Order did not include these loose surface contamination limits.

299. Modification 35 did not contain specific requirements for fixed contamination levels in the concrete, which is contamination bound on or into the material. Instead, fixed contamination limits were determined by reference to the Modification 35 "fence line" concentration target and NESHAP requirements, which set a goal for airborne concentration outside the DOE-EM work area (referred to as the "fence line"). Specifically, Section C.10.4 of Modification 35 required URS to perform "NESHAPS evaluations to establish an acceptable fixed contamination levels on surfaces to prevent suspension of radioactivity in air as a result of demolition operations."

2. URS Reasonably Relied On The HSA And Modification 35's Requirements To Determine That Only Limited Scabbling Would Be Required

300. The HSA provided data concerning the specific loose surface contamination and distribution levels for areas of Buildings H2 and G2. Sections C.2.2 and C.2.3 of Modification 35 directed URS to utilize the information provided in the HSA for planning work, so URS used the data in the HSA to plan its decontamination efforts to meet contractual contamination limits.

301. According to the HSA, the loose contamination in Buildings G2 and H2 was well below Modification 35's pre-fixative contamination thresholds (i.e., less than 2,000 dpm/100 cm^2 alpha and 100,000 dpm/100 cm^2 beta-gamma), with the exception of the G2 Cells and one area of the H2 Vault. Because of the loose contamination measurements in the HSA, URS reasonably believed that it would only need to engage in limited scabbling in certain parts of Buildings G2 and H2 to remove enough loose contamination to meet the Modification 35 limits.

302. In places where URS anticipated it would have to scabble, it did not anticipate scabbling more than one-quarter inch. One-quarter inch of scabbling, which can typically be accomplished through one or two "passes," is generally sufficient to remove fixed contamination, which is typically located in only the top millimeter of concrete.

303. Moreover, in the only two places where Modification 35 mentions scabbling, it sets a one-quarter inch limit:

- Section C.9 states that, to the extent URS pursued an alternative process for removing the H2 Tank, "scabbling *up to one-quarter inch may* be necessary on the exposed surfaces [of the east wall and floor remnant of the tank vault]." (emphasis added).
- Attachment D to Section J, which identifies the Government Furnished Services/Items, notes that "Current Contract E1/G1 Decontamination Limits may be too costly to achieve," and states that "DOE will use best efforts to pursue landlord concurrence on acceptable decontamination methodologies such as no more tha[n] ¼ inch of scabbling on floors, and non-invasive techniques such as strippable coatings on walls and ceilings."

This second reference to scabbling in Modification 35 pertained to the E1 Tunnel, which, according to the HSA, "contain[ed] radioactive sludge" and was likely to be highly contaminated. Nevertheless, Modification 35 contained a one-quarter inch upper limit for scabbling even in this highly-contaminated area.

304. DOE recognized that one-quarter inch of scabbling was a reasonable limit to avoid burdensome decontamination efforts for the H2 Tank Vault east wall and E1/G1 tunnels; if more than one-quarter inch of scabbling would be excessive in those high contamination locations, more extensive scabbling would not be required elsewhere.

305. URS based its cost and schedule estimates in the IRP and the post-Modification 35 baseline schedule on the data in the HSA. Specifically, in the IRP, URS stated its intent to scabble surfaces only where necessary (such as the G2 cell walls) to meet the pre-fixative contamination levels; this would be followed by the application of a fixative and then open-air

demolition. The IRP and Modification 35 schedule anticipated only fifty-five work days total for decontamination (including scabbling) of the G2 cell walls and Building H2 walls and floors.

3. URS Did Not Know, And Had No Reason To Know, That The HSA's Data On Buildings G2 And H2 Contamination Was Inaccurate

306. Because URS was not allowed to conduct any characterization on site after work was halted in September 2010 and before Modification 35 was signed, and reasonably performed only limited characterization earlier in the project, URS was unaware at the time of signing Modification 35 of the full extent or depth of contamination or the fact that it differed significantly from what was indicated in the HSA.

307. Also, prior to Modification 35, URS could not effectively survey the depth of fixed contamination in some areas of Buildings G2 and H2 because equipment blocked URS's access and/or was itself contaminated. URS's limited pre-Modification 35 characterization surveys, which were conducted with regard to the less restrictive contamination limits in the original Task Order rather than the explicit loose contamination limits added by Modification 35, resulted in data that was consistent with the HSA data.

308. Accordingly, prior to entering Modification 35, URS neither knew nor had reason to know that the contamination would be far greater than indicated by the HSA.

4. Buildings G2 And H2 Were Significantly More Contaminated Than The HSA Indicated

309. Once URS began more substantial characterization in mid-2014, it discovered that the HSA's contamination data was highly inaccurate, and the loose contamination levels were over *1,000 times higher* in certain places than indicated by the HSA.

310. A comparison between the loose radiological contamination in the Building G2 cells as described in the HSA and the actual loose contamination found by URS after

Modification 35 was signed shows up to +31,181% difference in alpha radiation and up to +76,977% difference in beta-gamma radiation.

311. Similarly, with respect to Building H2, URS discovered that several portions of the H2 Tank Vault—where URS had anticipated scabbling up to one-quarter inch—contained higher loose contamination levels than indicated in the HSA. A comparison between the H2 Tank Vault's loose radiological conditions described in the HSA and the actual loose contamination found by URS shows up to +113,536% difference in alpha radiation and up to +140,040% difference in beta-gamma radiation.

5. URS Had To Perform Significantly More Scabbling And Other Decontamination Efforts Than It Reasonably Anticipated

312. Because the contamination in Buildings G2 and H2 was substantially higher than URS reasonably anticipated, the amount of scabbling and other decontamination to meet the revised thresholds in Modification 35 was also substantially greater than anticipated.

313. While the fixed contamination drove the need to scabble at greater depths, areas of high loose contamination generally had proportionally high fixed contamination. Therefore, areas with loose contamination levels that significantly exceeded the levels URS reasonably anticipated based on the HSA also had high fixed contamination levels that URS reasonably did not anticipate.

314. Further, URS's cost and schedule estimates were focused on compliance with Modification 35's loose contamination limits—the actual contractual requirement in Modification 35—not fixed contamination. However, DOE ultimately required URS to meet fixed contamination limits that were not included in the contract.

315. As a result of this unanticipated contamination, URS was required to scabble and otherwise conduct demolition under the enclosures in both Building G2 and the Building H2

Tank Vault in a manner that far exceeded the efforts URS reasonably anticipated prior to execution of Modification 35.

316. URS sent DOE's contracting officer notices of differing site condition or pre-existing condition on November 17, 2015 and August 9, 2016 related to scabbling at greater depths than indicated in the Task Order. DOE's contracting officer denied URS's entitlement to an equitable adjustment on February 4, 2016 and August 23, 2016.

a) URS Had To Scabble Areas More Than The One-Quarter Inch URS Reasonably Anticipated

317. URS anticipated scabbling cells in Building G2 up to a maximum of one-quarter inch, but ultimately had to scabble several areas far deeper than it anticipated, including the Cell 1 walls (one to six inches); Cell 2 walls (one-half to seven inches); Cell 3 walls (up to three inches); Cell 3 north wall mezzanine (up to twelve inches); Cell 3 hallway (up to two inches); Cell 4 walls (up to eight inches); Cell 5 floors (two inches); Cell 5 lower walls (one-and-one-half to three-and-one-half inches); Cell 5 main and vessel area hallway (one to three inches); and Cell 5 main and vessel area walls (two to twelve inches).

318. Similarly, URS had to scabble or otherwise remove concrete for all of the Building H2 Tank Vaults, often up to eight feet above the floor and sometimes to full vault height (sixteen feet), to comply with the criteria for open-air demolition.

b) URS Had To Scabble Areas Where URS Reasonably Anticipated Performing No Scabbling

319. URS did not anticipate scabbling in certain areas, including the G2 Pump Room, Cell Access Corridor, Lower Sample Aisle, Upper Sample Aisle, Process Tunnel, G2/H2 Tunnel, Hot Tunnel, or Room 103. But after performing additional characterization post-Modification 35, URS learned that scabbling was required for these locations because the contamination in these areas was significantly higher than the contamination disclosed in the HSA. For example,

in the Process Tunnel, which merges into the G2/H2 Tunnel, there was up to +108,008% difference in alpha radiation and up to +66,633% difference in beta-gamma radiation than indicated in the HSA. And in the G2 Pump Room, there was up to +1,567% difference in alpha radiation and up to +5,676% difference in beta-gamma radiation.

320. URS had to scabble more than one-quarter inch in a dozen areas for which it had not anticipated doing any scabbling at all. For example, URS scabbled the Building G2 Pump Room floors two to twelve inches, the Process Tunnel floor wall seams three to four inches, and the Cell Access Corridor floor two to four inches.

321. In addition, even where URS anticipated scabbling portions of a wall or a room, URS reasonably believed that other portions would not require scabbling. For example, URS reasonably anticipated that no scabbling would be required in areas of Building G2 above the water line. However, URS found significantly more contamination than expected above the water line, requiring significant and unanticipated scabbling.

c) URS Had To Partially Or Fully Demolish Certain Portions Of The Building In Closed-Air Conditions

322. URS had anticipated that it would use machine scabbling for most of the required scabbling. However, machine scabbling is not effective or efficient where contamination has penetrated the surface two to twelve inches deep, as was often the case in the SPRU buildings.

323. Therefore, URS had to partially or fully demolish under the enclosures certain areas that were unexpectedly contaminated to depths that could not be decontaminated sufficiently with machine scabbling to meet Modification 35's open air demolition criteria.

324. This required URS to use less efficient and more expensive equipment and demolition methods than anticipated. For Building H2, for example, URS had to use heavy

construction equipment (a 6,000-pound skid-steer loader, fitted with a 300-pound hydraulic pavement breaker) to demolish concrete with deep contamination.

d) URS Had To Use Inefficient Scabbling Techniques And Tools

325. As a result of the contamination that was higher and deeper than URS reasonably anticipated, in a number of locations throughout the site, URS had to resort to less efficient scabbling techniques and tools than originally planned. For example, URS had to use jackhammers in contaminated areas of Building G2 because space limitations inhibited URS's ability to use the type of heavy equipment used in Building H2.

326. This required extensive efforts, particularly where URS personnel had to scabble high up the walls, requiring URS to erect several levels of scaffolding to enable workers to use jackhammers several feet above the ground. While performing this work, URS could not scabble multiple parts of the same section of the building simultaneously because personnel could not safely scabble beneath other personnel who were scabbling higher on the wall.

327. For corners between walls and floors, as well as for parts of the walls, URS personnel had to use smaller hand-held scabbling tools, rather than larger scabbling machines. These tools, which are heavy and produce high-frequency vibrations, are difficult for personnel to use for extended periods of time and are significantly less efficient (often by 50% to 75%). URS had to rotate workers or otherwise manage scabbling time to prevent injuries and to allow workers to rest. The additional use of hand scabbling tools caused by higher levels of contamination and/or contamination deeper in the concrete had a significant impact on overall scabbling efficiency, cost, and timing.

328. To address the challenges posed from fixed contamination at higher levels and deeper penetrations than anticipated, and in line with the parties' mutual commitment in Section H.920 of Modification 35 to "seek innovative approaches," URS experimented with new

equipment and techniques. URS solicited different vendors that had promising techniques to remotely use scabblers attached to walls or use aggressive tools larger than hand tools. While these innovative approaches proved somewhat successful for floor scabbling, they were less successful for wall scabbling.

329. Even where these methods and tools were effective, they were also hazardous and time-consuming. URS expended costs for equipment rentals and subcontracting costs that would have been avoidable but for the higher- and deeper-than-anticipated contamination requiring excess scabbling.

6. Unexpected Scabbling Caused Additional Work And Extensive Delays

330. The unanticipated contamination levels caused URS to incur additional activity-related costs associated with the additional scabbling and decontamination work in the Building H2 Tank Vault and Building G2.

331. As a result of URS's extensive scabbling and other decontamination efforts in Buildings G2 and H2 due to unanticipated contamination, the critical path work on Building G2 was severely delayed by 143 days. URS is entitled to reimbursement for the cost of this critical path delay.

H. Unexpectedly High Radiation And Contamination In Sumps Increased Costs

332. Numerous sumps were located throughout the SPRU site to collect liquid, sludge, and other materials from leaks and spills via pipes or "channels."

333. The HSA contained limited radiological and chemical characterization data for the sumps. Based on the information in the HSA concerning the contamination and radiological conditions of the sumps in the tunnels, the H2 Tank Vaults, and the G2 Cells and Pump Room, and URS's limited characterization work prior to Modification 35, URS reasonably did not

expect to find highly contaminated waste in the sumps or contamination that could not be removed through pressure washing.

334. The HSA also provided no indication of the presence of transuranic waste (waste with high levels of transuranic elements). The HSA references transuranic waste or elements only twice; both references appear in the definitions section. First, in the definition of "radioactive waste," the HSA states that "[l]ow-level radioactive waste is radioactive waste" that excludes various types of waste, including "transuranic waste." Second, after defining the term "transuranic," the HSA states that "SPRU operations involved [transuranic] elements." Notably, the presence of transuranic elements does not necessarily lead to transuranic waste.

335. Following the execution of Modification 35, once URS's personnel were able to conduct more detailed surveys, they discovered waste with significant levels of contamination in sumps in various locations throughout the buildings. URS also unexpectedly found waste that, when packaged, could potentially have produced transuranic waste.

1. The Extent Of Contamination In The Sumps Was Not Foreseeable Based On The Information Reasonably Available To URS

336. URS had no reason to expect the high levels of contamination it found or the presence of potential transuranic waste in the sumps based on the HSA. Nor was the presence, let alone level, of sump contamination or potential transuranic waste foreseeable from URS's pre-2010 incident surveys given their limited nature and resulting data, which was consistent with the HSA and did not indicate the presence of highly contaminated material in the sumps. Even where URS did identify removable contamination on the sides of the sumps, URS reasonably anticipated that it could be easily cleaned using pressure washing.

337. URS's pre-2010 surveys of the sumps were necessarily limited in scope. When performing pre-Modification 35 surveys, URS personnel often could not access the inside of the

sumps at all, or else could not access deep enough inside the sumps to characterize the contamination due to the sumps' physical configuration and depth.

2. The High Levels Of Contamination In The Sumps Increased URS's Costs And Caused Delays

338. URS's costs increased due to the unanticipated contamination in the sumps for three principal reasons.

339. First, properly decontaminating the sumps (and associated channels) and disposing of the sludge required extra characterization, sampling, planning, work packages, and material, as well as extra crews to handle the work and manage the dose rates.

340. Second, in some cases, it was not reasonably feasible for URS to achieve Modification 35's and DOE's post-Modification extra-contractual open-air demolition requirements using typical methods like scabbling, particularly in light of the higher-than-expected fixed contamination. For example, the channel openings to the sumps were very small, so workers had limited physical access and did not have sufficient leverage to use heavy hand-held scabbling tools to decontaminate the sumps. Further, contamination had seeped several inches into the concrete on all sides of the channels. As a result, instead of merely scabbling, URS had to demolish the channels, the sumps, and other areas within the Building H2 enclosure, resulting in inefficiencies and increased costs.

341. Third, the additional effort required to manage near-transuranic waste increased URS's cleanup costs beyond what it reasonably anticipated. URS unexpectedly had to manage potential transuranic sump materials as high activity mixed low level waste or low level radioactive waste. Treating such waste is extremely expensive.

342. Upon information and belief, the contracting officer was aware that URS encountered unanticipated levels of radiation and contamination in the sumps, which required

extra efforts for decontamination and removal, and that DOE's failure to cooperate in timely approving alternative methods of managing the sump waste was causing delays. For example, URS informed the contracting officer that addressing unanticipated contamination in particular sumps was causing delay.

343. In addition, recognizing that remediation of this contamination was outside the scope of Modification 35, DOE reimbursed URS for activity- and delay-related costs associated with unanticipated contamination in the Building G2 Cell 1 sump. However, DOE has not reimbursed URS for the remaining sumps in Buildings G2 and H2, including in the G2/H2 Tunnel.

344. The unexpected levels of radiation and contamination in the sumps led to unreimbursed activity-related costs. Additionally, URS incurred unreimbursed activity- and delay-related costs due to inefficiencies associated with demolition in the Building H2 enclosure, including because of the unanticipated levels of contamination in the sumps, the high levels of fixed contamination discussed in Section IX.G, and DOE's added requirements to reach certain verifiable fixed contamination levels before demolition as described in Section X.B.

I. URS Had To Fundamentally Change Its Approach Due To The Unforeseen Unreliability of the HSA

345. Because, as URS and DOE discovered, the HSA was riddled with errors and unreliable, URS's approach to the decontamination and demolition work was completely altered.

346. The inaccuracy of the contamination data in the HSA—particularly with respect to the depth of contamination—and its overall unreliable nature caused inefficiencies in URS's work. URS operated in a constant state of uncertainty regarding how much surface material would have to be removed to meet the acceptable contamination limits because URS did not know the depth to which contamination penetrated any single location.

347. Because URS lacked sufficient information to select the most appropriate decontamination tools at the outset, it was forced to engage in trial and error regarding decontamination techniques. This meant that URS wasted effort and equipment costs while adjusting its tools and methodology to address unexpected conditions.

348. These issues impacted URS's work and increased costs in many respects. For example, because of concerns about possible chemical exposure and the risk of unknown radiological contamination inside the insufficiently flushed piping and equipment, URS had to use more complex, more expensive, and bulkier personal protective equipment ("PPE") than anticipated. URS's workers were necessarily less efficient because of the physical limitations the PPE imposed and because it took workers time to put on and remove the PPE with each entry into the facility, a new hazard area, or exposure to a contaminant.

349. Because of the excess contamination, additional materials were needed to control contamination and reduce personnel dose rates, including more wipes, plastic sheeting, plastic bags, lift-liner bags, administrative supplies to support documentation, and lead shielding. Further, materials such as bottle hoses, drapes, and "hot-taps" were needed to prepare for and manage the piping and equipment clean-up work.

350. Discovery of unexpected hazards like mercury sometimes required revisions to work packages, and it took time to develop and obtain approval before the revised work could resume. To assess and guard against hazards caused by acids, bases, VOCs, and mercury, industrial hygiene and Radiation Control personnel had to conduct surveys, analyze some radiological samples on site, and ship other samples off-site for analysis. This additional testing caused work stoppages and took personnel away from critical path work.

351. Unanticipated work stoppages also occurred because URS had to sample and await results for the concrete and dust being disposed to ensure that the shipping containers in which this material was placed did not expose nearby workers to excessive dose rates. And, because of the higher-than-anticipated contamination, URS had to use disposable (rather than reusable) containers and not fill them completely, resulting in less efficient packaging and more containers being used. This approach increased handling, survey, and shipment costs.

352. To mitigate the safety risks caused by the unanticipated contamination, URS had to take additional safety precautions, including stopping work when chemicals got on PPE, holding additional safety trainings for employees, and conducting investigations to address safety issues. These precautions decreased worker efficiency.

353. The higher than anticipated radiation levels forced URS to rotate personnel at the work site at a higher-than-anticipated rate—particularly during removal of piping and equipment in Building G2 Cell 5—to limit their dose exposure.

354. The unanticipated contamination also meant that the project generated more hazardous/mixed waste and radioactive waste with higher average levels of radioactivity than anticipated. Due to the large areas that were highly contaminated, surveys and samples had to be transported outside of the direct work area to areas of lower contamination to avoid interference from ambient radiation. This "travel time" resulted in lost work time for crews waiting on sample results to proceed. In addition, contaminated material had to be removed in bags to prevent spreading of contamination. This bagging took additional time, required increased man-power for bulky and heavy items, increased waste generation, and added increased costs and storage requirements to purchase and stock the bags.

355. Because the buildings and the equipment were more contaminated than anticipated, URS had to use more engineering controls to ensure that its workers had sufficient respiratory protection. This required the increased use of vacuum cleaners, ventilation hoses, and HEPA filtered blowers; testing of these HEPA filters; and extra personnel to handle equipment as work progressed.

356. In addition, URS had to take extra steps to protect its personnel from excessive radiation doses, including by rotating workers across different parts of the job site. Tracking and monitoring personnel radiation exposure required significant administrative efforts, and each time an employee rotated to a new part of the project, work was delayed as he or she received necessary training (and sometimes had to develop new skills).

357. A fundamental requirement for the success of Modification 35's schedule and unique cost-sharing contract structure was accurate and fulsome historical data. Instead, the extensive contamination throughout the site and the sheer number of site conditions that differed materially from those set forth in the HSA completely upended the expected scope of work and destroyed the basis of the parties' bargain.

358. A contract riddled by the uncertainty URS experienced due to the inaccuracy of the HSA is precisely the type of contract that, under FAR Section 16.301-2(a), is intended to be cost reimbursable—as the contract is here, and as is the typical approach for decontamination and decommissioning projects. However, because of the cost-sharing structure in Modification 35, DOE has maintained that URS should be left to foot the bill for the costs resulting from the HSA's inaccuracies and the resulting uncertainty.

X. CHANGES DIRECTED BY DOE'S FIFTH CONDITION OF APPROVAL AND RELATED MODIFICATIONS INCREASED URS'S COSTS AND CAUSED DELAYS

359. After Modification 35 was signed, but before URS could proceed with open-air demolition of Buildings G2 and H2, DOE imposed a new requirement that the Oak Ridge Institute for Science and Education ("ORISE"), a contractor acting on DOE's behalf, perform surveys and samplings to independently validate open-air demolition readiness. This requirement was a part of a set of new "conditions of approval" to perform open-air demolition that the contracting officer unilaterally added to the contract. The independent verification requirement was imposed by the fifth condition of approval ("COA 5") and subsequent contract modifications.

360. Modification 35 did not require this independent validation. Indeed, DOE acknowledged in two other modifications that it was obligated to reimburse URS for delay-related costs resulting from changes introduced by the ORISE validation. Likewise, the contracting officer's 2020 COFD acknowledged that "[URS] is entitled to compensation for verified time-related and direct costs incurred by th[e] requirement" that ORISE "perform surveys and sampling to independently validate readiness for [URS] to begin open-air demolition on buildings H2 and G2"; however, DOE disputed URS's quantum.

361. The requirements imposed by COA 5 and associated modifications were changes to Modification 35 for which URS is entitled to reimbursement. These extra-contractual requirements imposed by DOE caused delays to critical path activities in both Buildings G2 and H2, resulted in URS being required to redo work it had already performed, and required URS to perform out-of-scope work.

A. Modification 35 Imposed Decontamination Requirements For Proceeding With Open-Air Demolition

362. Section C.10.4 of Modification 35 permitted URS to conduct open-air concrete removal at Buildings G2 and H2 once the concrete had been decontaminated sufficiently to prevent airborne contamination from impacting site operations. Specifically, Modification 35 provided that URS could proceed with open-air demolition after loose contamination levels reached certain thresholds and fixatives were applied to contain the remaining contamination.

363. To validate that URS had sufficiently decontaminated the building surfaces to meet the loose contamination standards, Section C.10.4 of Modification 35 required URS to sample loose contamination using 1 m^2 wipes. In addition, Section C.10.4 of Modification 35 required URS to perform ALARA, or "as low as reasonably achievable," evaluations and NESHAP evaluations to establish that the facility had met an acceptable fixed contamination level to prevent airborne contamination as a result of demolition operations.

364. Modification 35 did not include any other specific requirements regarding the method URS was required to use to take samples and perform surveys to determine remaining loose contamination or to conduct NESHAP evaluations. Rather, Modification 35 emphasized performance-based standards and gave URS the right to determine the specific methods used to accomplish the work. Modification 35 also did not require any third-party verification or independent surveys to confirm that contractual decontamination limits were reached prior to open-air demolition.

B. COA 5 And Subsequent Modifications Added New Conditions For URS To Proceed With Open-Air Demolition

365. In late 2012, DOE unilaterally established additional conditions of approval for open-air demolition that were outside the scope of Modification 35. Most notably, COA 5 imposed various verification protocols for open-air demolition that were not required by

Modification 35. Under changes introduced by COA 5, URS was required to obtain independent third-party verification of loose surface contamination level measurements prior to open-air demolition. DOE selected ORISE to perform the independent verification on DOE's behalf.

366. Neither COA 5 nor any of the subsequent Task Order modifications expressly altered Modification 35's limited sampling and survey method requirements or eliminated URS's contractual right to determine the specific methods for accomplishing the work.

367. DOE recognized the risk of delays as a result of this extra-contractual verification process and that COA 5 was a change to the contract, and agreed in Task Order modifications to reimburse URS for certain activity- and delay-related costs from the new requirements.

368. On September 9, 2015, DOE issued unilateral Modification 139, requiring URS to provide support to ORISE for DOE's verification of URS's decontamination of Buildings G2 and H2. The Statement of Work for Modification 139 established two DOE review periods. The first, *the survey review period*, committed DOE to providing URS "comments on areas that did not meet" the open-air demolition surveying and sampling criteria established by Modification 35 "within 5 working days for the initial results of radiological surveys, and within thirty calendar days for initial results of sample analyses." The second review period, *the data package review period*, provided that URS would deliver "[r]adiological surveys, sampling analyses, and related information demonstrating an area is sufficiently decontaminated prior to Open Air Demolition," and that DOE would have five work days for review and comment on these data packages.

369. In Modification 139, DOE agreed to "provide reimbursement of the incremental costs" for "project delays while waiting for final sample results/confirmation of satisfactory results past URS declaration of Demolition ready." This commitment applied to both Buildings

H2 and G2, and did not distinguish between delays attributable to the review periods themselves and delays caused by DOE's exceedance of the review periods.

370. In April 2016, DOE and URS signed bilateral Modification 155, under which DOE expressly agreed to compensate URS for incremental costs as a result of additional work to support ORISE for DOE's verification process and for delay costs associated with such support.

C. DOE Caused Delays To Open-Air Demolition Of Buildings G2 And H2

371. Neither Modification 35 nor COA 5 required independent verification surveys to be conducted *before* URS applied fixatives prior to demolition, but DOE added this additional requirement through unilateral Modification 139. Under the new requirements imposed by DOE, URS was required to obtain independent verifications by DOE's representative ORISE to confirm URS complied with the two loose contamination thresholds in Modification 35—the pre-fixative limit and final, post-fixative limit.

372. ORISE's *pre-fixative* verification would come after URS had ensured that the loose surface contamination met Modification 35's pre-fixative loose contamination limit either by power washing, wiping, or scabbling the concrete. Next, URS would apply a fixative—a coating applied to surfaces to seal any contamination and prevent airborne radiation—and would be permitted to proceed with open-air demolition after ORISE performed the final survey to ensure the loose contamination levels met Modification 35's lower contamination threshold. The critical path in Building G2 was delayed while URS waited for ORISE to conduct the first of these surveys.

373. Modification 139 provided that DOE had five days to review the data packages URS submitted showing that the area was sufficiently decontaminated prior to demolition. However, this five-day data package review period was a change from Modification 35, which did not include a DOE review period. In addition, DOE needlessly delayed approving open-air

demolition for Building G2 and Building H2, even beyond the five-day data review period set out in Modification 139, causing further critical path delays.

1. DOE Delayed Approving Open-Air Demolition For Building G2

374. URS substantially completed its pre-fixative scabbling work in Building G2 on February 12, 2016, at which point it was ready for ORISE to verify that it met the pre-fixative loose contamination threshold. But despite URS's request, DOE did not arrange for ORISE to verify the work, nor did ORISE make itself available to conduct the surveys in a timely manner. And DOE instructed URS not to apply fixatives to seal in the contamination until after ORISE conducted verification surveys.

375. During ORISE's delay, contamination in the Building G2 cell liners leached out onto the surfaces, requiring URS to re-clean and re-survey those surfaces to meet Modification 35's loose contamination limits again. Building G2 was on the critical path throughout the scabbling and through April 14, 2016, when the critical path switched back to Building H2. As a result of having to redo this work, as well as the extra-contractual sampling requirements discussed in Section X.F and the higher than anticipated contamination discussed in Section IX.G, the critical path was delayed by twenty-two days.

376. After URS decontaminated Building G2 again, URS again notified DOE that it had completed its surveys and samples of Building G2 as of March 15, 2016, and was ready to apply fixatives and perform final pre-demolition surveys.

377. URS also notified DOE on March 15, 2016 that, despite the fact that URS had completed its radiological surveys and taken samples in all rooms and areas of Building G2, it "[was] being prohibited from proceeding with current critical path work due to DOE's directed change requiring a two-step independent verification of each area within G2 (Fifth Condition of

Approval)." At that point, ORISE "ha[d] not completed its first series of verification surveys"—surveys added by Modification 139—thereby delaying URS's progress toward demolition.

378. URS could not begin to apply fixatives and perform final pre-demolition surveys until April 6, 2016—an additional twenty-two days of delay—when ORISE finally completed all of its Building G2 pre-fixative surveys and verified URS had met the requirements. Because DOE did not perform its pre-fixative verification surveys in a timely fashion as contemplated in Modifications 139 and 155, URS was delayed in proceeding with application of fixative, performing post-fixative surveys, and ultimately declaring the area ready for open-air demolition.

379. By April 20, 2016, URS had submitted all of its work package data, which showed that it was ready to begin open-air demolition. Pursuant to Modification 139, DOE had five working days—until April 27, 2016—to review the data packages. However, DOE missed that deadline. DOE did not give URS permission to begin open-air demolition of Building G2 until approximately two months later.

380. In total, URS incurred forty-four days of unreimbursed critical path delay costs resulting from the new requirements added by Modification 139 and DOE's and ORISE's delays. Of the forty-four days of unreimbursed critical path delay, the initial twenty-two days were also attributable to DOE's insistence on additional concrete samples, as detailed in Section X.F, as well as unanticipated scabbling, described in Section IX.G.

2. DOE Delayed Approving Open-Air Demolition For Building H2

381. For Building H2, URS was also delayed in starting open-air demolition for weeks after it had met the contractual decontamination requirements due to DOE's failure to comply with the deadlines for reviewing additional work imposed by Modification 139.

382. Specifically, URS completed open air samples and surveys in Building H2 on September 25, 2017, and submitted the Building H2 data packages on September 26, 2017. URS had sufficiently decontaminated Building H2 to meet the standards required by Modification 35 and DOE regulations and requirements, a fact reflected in the data packages.

383. DOE took nearly two-and-a-half weeks to confirm that the building was approved for open-air demolition, resulting in critical path delay to the project. On October 12, 2017, DOE finally confirmed that it was satisfied that Building H2 was ready for open-air demolition.

384. Building H2 was on the critical path during this entire sixteen-day, DOE-caused delay, and URS incurred delay-related costs due to DOE's sixteen-day delay in approving open-air demolition.

D. DOE's Additional Requirements And Delay Caused URS To Have To Redo Work

385. As noted, although URS was ready to apply fixatives in Building G2 after it finished scabbling on February 12, 2016, URS could not apply the fixatives until ORISE conducted its first set of verification surveys. Despite URS's requests, ORISE did not perform its surveys in a timely manner.

386. ORISE's delay in conducting its pre-fixative surveys on behalf of DOE allowed the contamination to leach into the G2 Cell liners and forced URS to perform additional decontamination on the liners to bring the loose contamination levels back down to the level of Modification 35's pre-fixative requirements.

387. Had URS been able to apply a fixative promptly after it finished scabbling, the fixative would have provided a barrier to contain the liner's loose contamination at the levels to which URS had decontaminated it. Because URS had to wait for DOE, which failed to cooperate and to arrange ORISE's work in a timely manner, and for ORISE to perform its

verification surveys, it had to reclean the G2 Cell liners before proceeding with its demolition efforts. URS thereby incurred additional activity-related costs resulting from the new requirements added by Modification 139.

E. DOE Increased URS's Costs By Requiring Building G2 And H2 Data Packages

388. DOE also increased URS's costs by requiring URS to document its open-air readiness in detailed and unnecessary data packages.

389. These data packages were not required by Modification 35, but rather were added by DOE through Modification 139. Specifically, Modification 139 included as a deliverable "[r]adiological surveys, sampling analyses, and related information demonstrating an area is sufficiently decontaminated prior to Open Air Demolition." Although URS developed and delivered the data packages for Buildings G2 and H2, DOE never compensated URS for the additional activity-related costs associated with developing the data packages.

F. DOE Imposed Additional Open-Air Sample And Survey Requirements Above And Beyond Modification 35's Requirements

390. Throughout the demolition of Buildings G2 and H2, DOE imposed more stringent requirements for testing and sampling pursuant to ORISE's verification than Modification 35 required and thereby significantly increased URS's costs and delayed approval of open-air demolition for both Buildings.

391. DOE knew that the work associated with ORISE's independent verifications constituted a change to Modification 35, as demonstrated by the modifications discussed in Section X.B. DOE was also aware that the additional sample and survey requirements with which URS was required to comply were beyond those required by Modification 35. Nevertheless, DOE deferred to ORISE, whom DOE referred to as "DOE experts," requiring URS to abide by extra-contractual demands instead of the requirements set forth in Modification 35.

1. DOE Required URS To Conform To ORISE's Sampling Methodology, Which Was Different Than Modification 35's Requirements

392. As noted, Section C.10.4 of Modification 35 required URS to measure loose contamination using 1 m^2 wipes. However, DOE experts from ORISE performed surveys using smaller (100 cm^2) wipes or "smears" that are appropriate when the surface in question will remain in use and people could be exposed to isolated areas of high contamination. Because ORISE used an approach intended for a different application than the demolition work to be performed by URS, it obtained results different from those obtained by URS.

393. URS was only required to comply with Modification 35's survey requirements, which were not intended to identify the maximum level of contamination in a particular localized spot, but instead to measure the average amount of contamination over larger areas (as is relevant to evaluate potential releases during demolition).

394. By following the Modification 35 requirements, URS's 1 m^2 wipes assessed average contamination over an area 100 times the size of the area assessed using ORISE's approach. Thus, the surveys by ORISE identified "exceedances" in very small areas, despite the fact that the contamination levels met the criteria in Modification 35 when appropriately averaged across a broader sample size.

395. Nevertheless, DOE deferred to ORISE's determinations as to whether URS had met the decontamination limits, and ORISE and DOE refused to coordinate to ensure a methodology consistent with Modification 35. DOE's contracting officer either directly approved this decision or ratified it through knowing acquiescence. As the contracting officer was advised, URS had to use two different sampling methods—one to comply with the loose contamination limits in Modification 35 and another to comply with the heightened requirements extra-contractually imposed by DOE as a result of the contracting officer's order that URS must

receive ORISE's verification before it could proceed with applying fixatives or demolition. By deferring to ORISE, DOE failed to use its best efforts to cooperate with URS or facilitate URS's performance, and interfered with URS's right to determine the specific methods use to accomplish the work.

396. The additional decontamination and survey work that URS had to perform to show it met the loose contamination standards as measured by ORISE's methodology exceeded URS's scope of work under Modification 35. Further, while the extra work URS had to perform resulted in increased costs and delay, it added little value to the project because loose contamination constitutes only a very small fraction of total potential emissions and the contaminated areas were being demolished and not left for continued use.

2. DOE Required URS To Survey Additional Building Surfaces

397. Through directives on URS's proposed decontamination procedures, DOE also required URS to sample *each* square meter of *every* area of the facility walls, floors, and ceilings. DOE's contracting officer was included on communications discussing this additional requirement, and either directly approved the requirement or knowingly acquiesced to it.

398. Modification 35 does not specify the quantity or density of the wipes to be used, but simply specifies the sample size to be used when samples are taken. Instead of sampling each square meter, URS planned to take representative wipes of walls, a method consistent with standard industry practice at other DOE sites.

399. By requiring URS to perform additional surveys beyond what was required in Modification 35, DOE imposed an extra-contractual obligation upon URS and interfered with URS's right to determine the methods of performance under the contract.

3. DOE Required URS To Provide Additional Concrete Samples

400. DOE also required that URS collect and analyze additional concrete samples as part of URS's surveying process despite the fact that Modification 35 did not specify requirements for fixed contamination in the concrete beyond the standard NESHAP regulatory requirements, nor did it impose specific requirements for sampling fixed contamination in the concrete.

401. While it is standard practice to measure the residual contamination as an *average* over a full contamination inventory, DOE required that URS show that *each* sampled area individually met fixed contamination limits. Because NESHAP requirements are focused on the contamination in the air caused by demolition, the specific contamination contained in any individual area is not the relevant measurement; what matters, for the purpose of limiting contamination released into the air upon demolition, is the total contamination.

402. Consistent with the industry standard, URS took nearly fifty concrete samples as part of the Building G2 characterization work and thirty concrete samples as part of the Building H2 characterization work in 2014 and 2015. These samples were sufficient to confirm that Buildings G2 and H2 met open-air demolition fixed-contamination criteria—even before additional decontamination efforts—because the sample average met the NESHAP criteria for fixed contamination.

403. DOE submitted the open-air analysis to EPA, which accepted it as documenting compliance with the regulatory requirement. However, rather than accepting URS's approach of measuring the residual contamination as an average over the full contamination inventory—an approach that was industry standard and that EPA already accepted as meeting the regulatory standards—DOE required that each sampled area individually meet fixed contamination limits, which necessitated additional sampling. In so doing, DOE failed to use its best efforts to

cooperate with URS and to facilitate URS's performance, and interfered with URS's contractual right to determine the specific methods used to accomplish the work.

404. DOE's contracting officer was copied on DOE's written direction to URS to take additional samples to verify radiological conditions, was aware that URS was being required to take additional samples for ORISE, and either directly approved or knowingly acquiesced to this direction, thus ratifying it.

405. DOE's contracting officer's imposition of the ORISE-verification requirement in COA 5 and Modification 139 resulted in URS being required to take additional concrete samples beyond what it reasonably expected based on Modification 35's limited sampling requirements and industry practice on similar DOE projects. The contracting officer's unilateral decision to impose verification by ORISE also required URS to decontaminate well below the average value that should have been applied.

4. Additional Sample And Survey Requirements Increased Costs And Caused Delays

406. These extra-contractual survey and sample requirements caused eighty-two days of critical path delay. The extra-contractual methodological requirements and additional surveys and samples required by DOE caused URS to incur unreimbursed activity- and delay-related costs.

G. DOE Required URS To Prepare For And Attend Meetings That Were Not Required Under Modification 35

407. URS was required to prepare for and attend forty-nine one-hour Project Safety Review Board ("PSRB") and Senior Management Review Team ("SMRT") meetings held solely at DOE's insistence, even though none were required by Modification 35 for this scope of work. DOE imposed a requirement in URS's demolition-readiness verification procedures that any exceedances of contamination limits had to be reviewed by PSRB or SMRT, so these meetings

were necessary to present DOE with information regarding the status of the surveying and samples under COA 5 and related Modifications to obtain DOE approval that the facilities were ready for open-air demolition. Upon information and belief, the contracting officer was included in communications concerning the added requirements, was aware of the extra work required of URS, was on notice that URS considered these meetings to be a change to the scope of work required under Modification 35, and directly approved or knowingly acquiesced to DOE's orders, thereby ratifying them. In addition, these additional meetings were inconsistent with the streamlined procedures and processes called for by Modification 35.

408. URS expended personnel resources to prepare for and participate in these additional meetings. URS incurred activity-related costs attributable to these meetings.

XI. URS WAS REQUIRED TO REMOVE CONTAMINATED SOIL IN EXCESS OF MODIFICATION 35'S BOUNDING CONDITION

409. Modification 35 expressly set a bounding condition on the amount of contaminated soil URS would be required to remove, and provided that soil removal in excess of the bounding condition was excluded from Modification 35's cost-sharing structure. URS ultimately was required to remove contaminated soil in excess of the bounding condition, and is entitled to an equitable adjustment as a result.

A. Under Modification 35, DOE Is Responsible For Costs Of Soil Removal In Excess Of The Bounding Condition

410. Section B.4.4 of Modification 35, titled "Costs Not Subject to Cost Sharing," provided that "[t]he bounding conditions set forth in various parts of Modification M035 establish conditions under which no equitable adjustment is applicable, and above which an equitable adjustment may be applicable."

411. Modification 35 included a bounding condition for contaminated soil. Regarding Building G2 and the G2/H2 tunnel, Modification 35 Section C.2.2 provides:

> As a bounding condition of possible unknown radioactive contamination, it will be assumed that the amount of contaminated soil to be removed after the G2 building is removed and cleared of debris is 40,320 cubic feet (represents volume of soil in the waste container). Additionally the bounding condition of soil under the Building G2/H2 connecting pipe tunnel is 6,048 cubic feet (represents volume of soil in the waste container).

Regarding Building H2, Modification 35 Section C.3.3 provides:

> As a bounding condition of possible unknown radioactive contamination, it will be assumed that the amount of contaminated soil to be removed after the H2 Building is removed and cleared of debris, and the vault enclosure floors are removed is 109,200 cubic feet (represents volume of soil in the waste container).

412. The bounding condition for soil removal was intended to allocate the risk of excess contaminated soil above the bounding condition to DOE by providing that URS would be required to remove only the specified amount of contaminated soil, excluding the G2 and H2 buildings themselves and any related debris.

B. URS Removed Soil In Excess Of The Bounding Condition

413. By May 21, 2018, URS had removed contaminated soil equal to the bounding condition for Buildings G2 and H2 and the Building G2/H2 pipe tunnel. On August 2, 2018, while soil removal was ongoing, but after it became apparent that URS would be required to remove contaminated soil well in excess of the bounding condition, URS notified DOE's contracting officer of the excess soil and submitted a request for equitable adjustment, which DOE denied on September 14, 2018.

414. Ultimately, URS removed 280,800 cubic feet of soil in excess of the total amount set forth as the bounding condition. Because the bounding condition sets the level of contaminated soil to be removed to the exclusion of concrete and debris, this amount excludes concrete and debris that might have been cleared or containerized with contaminated soil.

415. As a result of removing this excess soil, URS incurred activity-related costs for excavation and waste load-out, waste disposal, and waste management, as well activity-related costs due to the need to backfill additional areas.

416. Soil removal in excess of the bounding condition also caused significant delay to the critical path. Following completion of Building H2 demolition on May 18, 2018, the critical path of the project shifted to in-progress soil removal. URS subsequently reached the combined bounding condition no later than May 21, 2018. URS performed critical path contaminated soil removal through August 5, 2018, after which point URS commenced other critical path activities. The soil removal in excess of the bounding condition caused further critical path delays because URS had to backfill more soil than planned pursuant to Modification 35 to replace the additional excavated soil. In sum, removing soil in excess of the bounding condition caused a ninety-one-day critical path delay, which increased URS's costs.

XII. DOE-ORDERED CHANGES TO BUILDING H2 SOIL BACKFILL REQUIREMENTS INCREASED URS'S COSTS

417. Once Building H2 was excavated, URS needed to fill the vacant building footprint with soil in a process known as "backfilling."

418. While Modification 35, and later Modification 192, included detailed backfill and compaction requirements, DOE placed additional and unreasonable conditions on the backfill process. Specifically, despite the fact that recycled soil (referred to as qualified reuse material) met the contractual criteria for radioactivity, because of DOE's and KAPL's unfounded concerns about residual allowable radioactivity, DOE extra-contractually required the qualified reuse material to be placed as near to the bottom layer in the excavation as possible.

419. Because the qualified reuse material had a higher proportion of "fines" (small particle material such as clay or silt) and a higher water content, it was not suitable for use near

the bottom layer of excavation, and this newly imposed requirement caused the work to be more difficult and time-consuming.

A. Contractual Requirements For Backfill Requirements

420. Section C.8 of Modification 35 required URS to "restore the [Building H2] area to original grade and provide grading to prevent pooling of water and to minimize erosion."

421. Under Section C.8 of Modification 35; Exhibit E to Modification 35, which according to Section C.8 of Modification 35 provides the "[s]tructural fill, backfill, compaction, reseeding, and paving specifications"; and bilateral Modification 192, the following requirements applied to URS's use of reuse material as backfill:

- URS could use "fill meeting the backfill criteria of the Miscellaneous Specifications in Attachment E, in lieu of structural fill" to backfill the Building H2 footprint.
- URS was required to "practice due diligence sampling of structural fill, back fill, and topsoil suppliers to ensure fill materials are not contaminated with chemicals or radioactivity."
- Excavated material was required to be "used at the proper water content to permit compaction."
- Fill was required to be "thoroughly and satisfactorily compacted" to specifically enumerated percentages of "maximum density" or else URS was required to comply with a performance specification for compaction.

B. DOE Constructively Changed The Backfill Requirements, Causing Delays

422. Although URS and DOE had reached agreement on the backfill and compaction requirements, as documented in Modifications 35 and 192, DOE unilaterally imposed additional, extra-contractual requirements.

423. Consistent with the specific requirements of Modification 35's Exhibit E and Modification 192, URS planned to fill the Building H2 footprint with structural fill at the bottom of the excavation area, followed by qualified reuse material excavated from various portions of the site, followed by top soil. URS's proposed plan would allow URS to distribute the qualified

reuse material, which contained a higher proportion of fines and a higher water content than structural fill, in a thinner layer over a larger area, mitigating compaction challenges.

424. However, DOE rejected this approach, interfering with URS's contractual right to determine the specific methods for performing the work and failing to use its best efforts to cooperate with URS. Upon information and belief, DOE's objection was based on unfounded concerns purportedly expressed by KAPL that the qualified reuse material might contain sufficiently elevated concentrations of contaminants such that KAPL would have to handle it with radiological controls in the future.

425. In fact, the qualified reuse material had to meet Modification 35's radiological cleanup specifications for soil before it could qualify as "qualified reuse material." Therefore, by definition, it could not contain elevated concentrations beyond what URS was permitted to leave in the on-site soil.

426. Nonetheless, DOE conditioned URS's use of qualified reuse material—beyond the specific requirements of Modifications 35 and 192—on URS placing the qualified reuse material as near to the bottom layer in the excavation as possible.

427. URS wrote to DOE objecting to this direction because "[URS's] restoration contractor has suggested that placing the reusable soil deeper in the excavation could compromise the potential to achieve the desired compaction as structural fill is placed upon the reused soil," and noting that "[t]he DOE consultant expressed a similar view in suggesting it would be better to place the material near the top, just under the top soil cover." This communication was also sent to DOE's contracting officer.

428. In a response copying DOE's contracting officer, DOE admitted KAPL's underlying concerns were unfounded: "Radiological samples of the structural fill and other

materials from this excavation area indicated no radioactivity present." Nevertheless, DOE rejected URS's concerns.

429. There was no contractual requirement to use qualified reuse material at depth. In fact, Exhibit E to Modification 35 specifically directed that excavated reuse material "shall be used at the proper water content to permit compaction in accordance with this specification." By directing URS to take actions inconsistent with this requirement by insisting that it place the softer, water-filled material at or near the bottom of the excavation, DOE breached its contractual duty to use its best efforts to cooperate with URS and facilitate URS's performance. Likewise, by improperly dictating the means and methods by which URS would perform its work, DOE interfered with URS's right to determine the specific methods used to accomplish the work.

430. DOE's added conditions for the use of qualified reuse material increased URS's costs in several ways. First, placing qualified reuse material near the bottom of the excavation resulted in a soft surface that became difficult to compact. Structural fill placed on top of wet clay material "heaved" during compaction, and to address the issue, URS had to import loads of three-inch stone to stiffen the material. Second, the DOE-imposed requirement for placing the qualified reuse material at depth resulted in URS having to use smaller trucks for backfill because larger trucks would get stuck in the softer reuse material, further diminishing productivity. And third, these new conditions, along with other prior DOE-caused delays, prevented URS from completing backfill before winter and thus prevented URS from resuming this work until after the winter thaw in spring 2019.

431. In sum, DOE's extra-contractual requirements delayed the project's critical path, causing costs for five days of delay caused by the restrictions on qualified reuse material, and for 139 days of delay during the winter shutdown.

XIII. DOE VIOLATED ITS EXPRESS DUTIES TO USE ITS BEST EFFORTS TO COOPERATE WITH URS, TO FACILITATE URS'S PERFORMANCE, AND TO NOT INTERFERE WITH URS'S PERFORMANCE, AS WELL AS ITS IMPLIED CONTRACTUAL DUTIES

432. When DOE pushed for a unique cost-sharing structure in Modification 35, URS recognized that DOE's cooperation would be critical to ensure successful completion of the Task Order on schedule and budget. As a result, URS insisted on specially drafted provisions, obligating DOE to provide the highest level of support and facilitation. These provisions created a heightened obligation to further URS's performance, separate and apart from the implied duty to cooperate inherent in all government contracts.

433. DOE's commitment in Modification 35, Sections H.920 and H.902, was specific and significant. DOE committed to: (1) seek innovative approaches to achieve the end objective; (2) eliminate non-value-added requirements; (3) be responsive and timely; (4) effectively communicate with URS; (5) use its best efforts to reduce processes that impede performance; and (6) use its best efforts to cooperate with URS and facilitate URS's performance. Because Modification 35 emphasized performance-based results rather than a "build to print" approach where the government furnished detailed, exacting specifications, DOE further agreed that URS—and *not* DOE—had the responsibility for determining the specific methods used to accomplish the work.

434. Much of DOE's conduct described in paragraphs 1 through 431 constitutes a breach of its express contractual requirements under Sections C.1.1, H.920, and H.902 and its implied contractual duties. As discussed, DOE:

- Failed to disclose critical information about the need for pre-construction NESHAP permits for the H2 and G2 enclosures and PVUs;
- Waited six and eight weeks, respectively, before sending the NESHAP applications to EPA for the H2 and G2 enclosures;

- Caused months of delays to URS's hillside remediation work by failing to issue directions in a timely manner, failing to act promptly to obtain the required funding, and issuing multiple rounds of changes and revisions to work packages;

- Unreasonably refused to accept enclosure designs that met contractual requirements;

- Unreasonably and inappropriately issued iterative rounds of comments and delayed for weeks in requesting DOE Headquarters' approval of URS's water disposal plan, even though DOE Headquarters had already indicated its support;

- Unreasonably failed to resolve outstanding contractual, funding, and technical issues that needed to be resolved before URS could create a complete revised baseline and so that URS could perform work in an efficient sequence;

- Unreasonably failed to timely facilitate URS's investigation of the source of excess water leaking onto the SPRU site from the KAPL site;

- Unreasonably failed to timely review and comment on URS's data packages demonstrating open-air demolition readiness, thereby needlessly delaying demolition;

- Imposed unreasonable survey and sampling requirements to fulfill COA 5's verification requirements;

- Imposed unreasonable extra-contractual requirements on the use of qualified reuse material as fill; and

- Usurped URS's responsibility for determining the specific methods used to accomplish the work.

435. But there are many other ways in which DOE failed to streamline processes, eliminate non-value-added requirements, or otherwise cooperate with URS and facilitate URS's performance.

A. DOE Failed To Coordinate Stakeholders And Allowed Third Parties to Interfere With And Hinder URS's Work

436. DOE failed to coordinate stakeholders, resulting in an uncoordinated litany of comments and oversight, and, ultimately, increased costs and significant delay.

437. While Modification 35 contemplated some involvement of other government entities, this was limited by the plain language of the contract: Of the eighty-eight deliverables identified in Modification 35, only eight required approval by an entity other than DOE.

438. But DOE repeatedly ceded its contractual oversight role to a host of other federal and state agencies, including NR, EPA, and the New York State Department of Environmental Conservation ("NYSDEC"). None of the eighty-eight contract deliverables required submission to or review and approval by NR; instead, only state and federal environmental agencies (specifically, EPA and NYSDEC) were identified for consultation, and only for a narrow set of environmental compliance deliverables.

439. DOE, however, repeatedly consulted with NR and allowed NR nearly free reign to interfere with URS's work. For example, DOE asked NR to provide comments on URS's Decommissioning Plan in June 2012, and KAPL/NR representatives monitored and scrutinized URS employees and subcontractors as they performed daily work, which influenced the performance of work.

440. DOE-EM also required that any communication with any regulator include NR participation, which was purportedly required under a memorandum of understanding between DOE and NR. This requirement was not in Modification 35, nor was URS aware of this purported requirement prior to executing Modification 35.

441. Following Modification 35, this new extra-contractual requirement significantly complicated URS's dealings with regulators. It resulted in URS having to wait for and then incorporate feedback from multiple parties before submitting standard regulatory filings; URS having to engage in substantial coordination before communicating with regulators; and otherwise limiting URS's ability to informally coordinate with state regulators, which could have facilitated more productive working relationships.

442. DOE also failed to establish a process to resolve stakeholder input in a timely manner. Instead, DOE allowed KAPL (and other outside stakeholders) to review, comment on,

and approve various survey packages, plans, and other documents produced by URS, even when Modification 35 did not require such approval.

443. As another example of DOE's failure to coordinate stakeholders, DOE also failed to coordinate truck gate access for URS during KAPL security's one-hour mid-day break. Specifically, in April 2018, during a period of peak waste shipping, URS requested that it be permitted to have six to twelve waste shipping trucks access the site during the break for a few weeks, which would have increased efficiency, reduced wasted time, and allowed shipping routes to be completed without reaching drivers' service hour limits. Less than twenty-four hours after URS made this limited and reasonable request for one additional hour of gate staffing for a one-month period, it was denied, indicating the minimal effort DOE undertook to facilitate this reasonable accommodation and its concomitant failure to use its best efforts to cooperate with URS and facilitate URS's performance.

B. DOE Failed To Facilitate Water Disposal Approval By NYSDEC And To Facilitate Timely KAPL Submissions To NYSDEC

444. Following Modification 35, URS procured and installed a new water treatment system, reasonably expecting that it could discharge certain treated water into the Mohawk River under modifications to an existing NYSDEC permit. But DOE failed to use its best efforts to ensure timely KAPL submissions to NYSDEC or to otherwise facilitate approval of the modified KAPL discharge permit.

445. URS submitted its permit application package in August 2012, but instead of streamlining the process, DOE substantially delayed it. As a result, URS was forced to dismantle and return its water treatment system, which URS leased at significant cost, and to continue to ship all water offsite for the duration of the SPRU project.

C. DOE Provided Excessive Comments And Missed Deadlines

446. On March 27 and 28, 2012, DOE and URS performed a comprehensive review of the SPRU Decommissioning Plan. The purpose was to specifically identify the modifications necessitated by the revised path to completion following NESHAP- and hillside-related delays, and reach an agreement on the extent of changes needed to finalize the Plan.

447. URS and DOE identified and agreed to specific outstanding actions. The parties provided three weeks for DOE to review and comment on a revised draft of the Plan, one week for URS to incorporate DOE's comments, and for finalization of the Decommissioning Plan upon incorporation of DOE's comments.

448. URS submitted the revised draft of the Decommissioning Plan on May 15, 2012; under the agreed-upon schedule, the final plan should have been issued no later than June 15, 2012. On June 5, 2012, DOE responded with 149 comments, some on decidedly trifling matters and others for which a response required significant work by URS. Notwithstanding the excessive number of comments, DOE stated that it was "still reviewing this plan and additional comments may be transmitted to URS within 7 days."

449. DOE caused further delay by failing to respond to URS's revisions for weeks. When it did respond, it either rejected or had further comments on URS's responses to 39 of the 149 comments. URS was forced to submit multiple revisions of the Decommissioning Plan, with substantial delays on DOE's part each time.

450. In addition, DOE provided excessive comments and missed deadlines for review of data packages produced pursuant to Modification 139. As discussed in paragraphs 388 through 389, DOE insisted that URS prepare extensive data packages for each of the buildings to demonstrate open-air readiness. While these data packages were intended to simply show compliance with the contamination limits, DOE ultimately demanded that URS submit detailed,

voluminous, lengthy documents beyond mere survey data and calculations before it would sign-off on open-air demolition.

451. DOE also wasted significant time and project management resources nitpicking URS's calculations and requiring formal revisions of underlying documentation before it would sign off on URS proceeding with critical path work. For example, DOE unnecessarily interfered with URS's efforts to discharge stormwater from the Building H2 excavation area. DOE significantly delayed responding to communications, approving plans, and in coordinating stakeholder approval, causing significant complications.

452. DOE also unilaterally decided to bring other third-party stakeholders, including NR, into the process and gave them the ability to comment on URS's work, even though Modification 35 did not provide for their review or approval. NR's intrusion into the project created additional delays as it would generally not review a URS document until DOE-SPRU had completed its review and comment cycle (rather than reviewing in parallel), which forced URS to undergo an additional review and comment cycle with NR once the DOE-SPRU comment cycle was completed. For example, DOE required URS to address extensive comments from NR on the demolition plans, including the open-air emissions analysis and the demolition methodology. DOE-EM effectively gave NR veto-like power over certain aspects of URS's work, including the transition to open-air demolition, a critical project milestone, which had the result of further delaying URS's progress on the project.

453. DOE frequently extensively delayed or failed to respond to URS's letters and proposals. Since May 2013, there were at least 15 instances where URS requested or otherwise expected a DOE response to a letter or proposal, but DOE took over 300 days before it responded. And, as of November 8, 2018, there were nearly 60 letters where a response was

warranted but to which DOE had not responded for at least 100 days. Of these letters, nearly 80% had been awaiting DOE's response for over 300 days, and over half had been outstanding for over 1,000 days.

454. In numerous instances, URS required the long-delayed DOE guidance or confirmation to advance the project, and DOE's failure to respond in a timely manner therefore adversely impacted the critical path. URS explicitly warned DOE about this issue, and, when no improvement was made, specifically explained to DOE the effect of this delay on the project's progress.

D. DOE Provided Only A Conditioned Notice To Proceed

455. Under Section C.10.3 of Modification 35, Restart of D&D Operations and Readiness Evaluation, URS was required to take various steps prior to restarting D&D operations. Once URS completed these steps, Modification 35 provided that DOE would "review the documentation of readiness and provide the contractor findings and observations, if any, for resolution within ten business days. A Notice to Proceed will be issued by DOE once the contractor resolves the comments."

456. Rather than streamlining processes and using its best efforts to cooperate with URS and facilitate URS's performance, DOE solicited and relied on extra-contractual third party input from EPA that added requirements not mandated by Modification 35 for obtaining a Notice to Proceed and limited URS's ability to perform work expressly allowed under the plain terms of Modification 35.

457. URS fulfilled all prerequisites for obtaining a Notice to Proceed, but DOE failed to meet its contractual obligation to provide one. Instead, DOE provided URS with a "Notice to Proceed" in name only. Specifically, on December 14, 2012, DOE provided URS with a document termed a "Notice to Proceed" that was anything but a notice to proceed, as it instructed

URS that it could *not* initiate D&D work on G2 until the H2 enclosure was completed, even though (1) URS had met all the required steps for the Notice to Proceed under Modification 35, and (2) DOE knew since at least summer 2012 that URS had planned to begin D&D work in G2 with a Notice to Proceed while H2 enclosure work would continue for several months. A document that specifically prohibits a contractor from beginning its work is not a notice to the contractor that it may proceed with such work.

458. On December 19, 2012, URS notified DOE's contracting officer that it considered its requirement to finish work on the H2 enclosure prior to initiating D&D work to be a change to the contract.

E. DOE Failed To Implement A Process For Resolving Problems

459. Following the execution of Modification 35, URS raised a series of technical issues with DOE. DOE consistently failed to resolve these issues in a timely manner as required by its contractual duty to use its best efforts to cooperate with URS and facilitate performance of the contract.

460. Of note, by the end of 2012, URS was nearing completion of the H2 enclosure, at which point it expected to finally commence intrusive D&D work. However, as URS began to plan for that work, it encountered a variety of technical issues that threatened to complicate cleanup efforts and increase costs far beyond those contemplated by the parties when they executed Modification 35.

461. For example, Building H2 was near an active KAPL building, Building F. Building F appeared to be structurally reliant on Building H2, and the removal of the H2 Tank Vault without additional shoring could have destabilized the building.

462. Section C.2.3 of Modification 35 provided that an alternative approach could be taken so that the entire tank vault would not need to be removed—an approach referred to as the

Tank Vault Alternative. In line with that option, URS proposed an alternative approach that would have prevented the destabilization of Building F by leaving portions of the Tank Vault in place, while still effectively addressing contamination by taking measures to contain and seal any potential contaminants.

463. Although URS's proposed alternative approach was allowed by and consistent with Modification 35's terms, DOE repeatedly rejected it (often after extensive delay and equivocation) and insisted that the Tank Vault be removed.

464. DOE also failed to use its best efforts to cooperate with URS regarding technical issues related to hillside grading. URS explained to DOE that it would be futile to attempt to re-grade the hillside to its original grading on top of uncompacted fill. URS sought DOE's cooperation in addressing this technical challenge. Rather than cooperate with URS to address the challenge, DOE simply stated in a March 21, 2014 letter, that "[i]t is up to URS to decide to restore the work areas to grade per the statement of work, or purse [sic] an alternative grading and change to the statement of work."

465. A few months later, in a June 20, 2014 letter responding to yet another URS proposal for addressing the hillside grading issue, DOE again refused to use its best efforts to cooperate with URS or to facilitate URS's performance. To the contrary, DOE adopted a "head in the sand" approach, stating that, "[w]ith regard to hillside instability, DOE is not aware of any hillside instability issues that are currently affecting URS's ability to complete its task order scope of work."

466. DOE finally reversed course one month later, indicating to URS that the KAPL landlord was willing to provide URS with "some latitude in changes to grading." But DOE's

proposed grading plan contemplated significantly more excavation of contaminated soil than the bounding conditions set forth in Modification 35.

467. DOE also placed restrictions on URS's ability to plan for D&D work because of the undefined end-state with respect to a VOC plume, an area of chemical contamination referred to in Modification 35 as an "area of concern" that was in the middle of URS's work area, but expressly excluded from URS's scope of work.

468. For URS to proceed with the D&D work, DOE needed to either remediate the VOC plume or tell URS to proceed with the VOC plume intact and modify any contractual requirements accordingly. DOE refused to address its responsibilities regarding the VOC plume, which constituted a failure to use its best efforts to cooperate with URS or facilitate URS's performance of the contract.

469. Ultimately, URS proceeded with what it reasonably considered to be the best available option and sequenced its work on the site to work around the VOC plume rather than risking working through the plume without an approved plan. This resulted in project inefficiencies that could have been avoided had DOE properly resolved this issue.

470. Further, as URS performed characterization in preparation for intrusive D&D, it identified contamination levels and conditions in several locations that were inconsistent with the descriptions in the HSA.

471. URS raised these issues in meetings with and submittals to DOE, yet DOE failed to provide any additional information regarding the contamination that could have assisted URS in properly preparing for the site's cleanup; any additional funds for the increased costs caused by the higher contamination levels; or any solutions to deal with these higher contamination levels.

472. DOE also failed to use its best efforts to cooperate with URS and facilitate performance of the contract when it denied URS's reasonable discrete requests for extended work schedules. Specifically, URS sought to change the work schedules to minimize overtime costs and finish specific projects before the winter. DOE initially suggested that it would approve URS's requests; however, DOE ultimately denied them, even while acknowledging that the requests reflected URS's "effort to bring the SPRU Project to completion."

473. DOE also subjected URS personnel to increased safety risks through its interference with URS's right to determine the specific methods for accomplishing the work. DOE imposed extra-contractual and excessive requirements, purportedly for "safety" reasons, but the requirements actually increased the risks to URS personnel. Consequently, URS had to implement compensating safety controls.

474. For example, as discussed in paragraphs 252 through 257, the work to remove the Building G2 roof header vent had to be done at hazardous heights, which made removal particularly challenging, especially during adverse weather. While URS had proposed safer alternatives—such as painting the pipe interiors and plugging them from within the building—DOE did not give URS permission to adopt them, and URS thus had to proceed with removal. This increased risk for URS workers, requiring them to take additional precautions (and work more slowly).

475. DOE also delayed providing URS with reasonable onsite soil storage. After excavating soil from various areas on the site, URS needed to establish and maintain stockpiles of the qualified reuse material on the site for subsequent use as backfill. DOE eventually allowed URS to store the materials on-site, but only after unreasonable delay.

F. DOE Encouraged URS To Develop Alternative Approaches For Accomplishing The Work, Only To Unreasonably Deny URS's Proposals

476. DOE encouraged URS to pursue more efficient alternatives for accomplishing the work. In numerous instances, URS invested significant time and effort developing alternative approaches, only to have DOE unreasonably reject them.

477. For example, DOE refused to approve the use of harmonic delamination, a process that would have reduced the time needed to break up concrete during demolition, despite DOE's expert expressing no concerns with this approach. As compared to traditional demolition methods, this process would have reduced the noise and vibration experienced by on-site personnel and the local community. The unreasonableness of DOE's decision to decline approval was exacerbated by the fact that it had previously indicated approval would be provided in a reasonable time frame, thereby encouraging URS to invest resources in what proved to be a wasted effort.

478. Had URS's proposal been approved, the added efficiencies from harmonic delamination would have expedited performance and decreased costs. If DOE had timely rejected the proposal instead of waiting a year to do so, URS would at least have understood early on what it had to do. Instead, URS expended time and money on what DOE turned into a fruitless and quixotic endeavor.

479. DOE also unreasonably precluded URS from proceeding with the Building H2 Tank Vault Alternative, despite URS expending time, energy, and funds to develop proposals for multiple different options for leaving the Building H2 Tank Vaults in place, as envisioned by Section C.9 of Modification 35.

480. In addition, DOE unreasonably prohibited URS from leaving the Building H2 slab in place. Decontaminating the slab and leaving it in place would have significantly limited the

amount of concrete removal work required to complete the project—thereby saving time and money without compromising the clean-up goals of the project site. However, DOE delayed making a decision, imposed unreasonable requirements, and then refused to revise requirements even as it sought to accelerate the project.

481. DOE also imposed unreasonable and unscientific cleanup and sampling standards on URS's efforts to decontaminate piping in the Building H2 Tank Vault wall. Only after URS had engaged in an extensive process to engage a subcontractor, prepare testing plans and work packages, present plans to DOE, incorporate DOE feedback on those plans, perform two rounds of flushing and two different methods of testing, and present its preliminary findings to DOE, did DOE suddenly begin to assert that URS must meet excessive cleanup criteria that were, in fact, inapplicable. If DOE was going to require URS to meet inapplicable and overly rigorous decontamination standards, it should have stated as much before encouraging URS to spend hundreds of thousands of dollars engaging a subcontractor, decontaminating the pipe, and performing tests for DOE, only to ultimately have to spend additional time and energy removing the pipe. Instead of streamlining URS's performance and eliminating non-value-added requirements, DOE encouraged URS to waste resources over approximately a year-long period and considerable resources, pursuing a path that could never have met DOE's extra-contractual standards.

G. DOE Failed To Follow The Appropriate Chain Of Command

482. DOE went directly to URS personnel and subcontractors, rather than through the appropriate chain of command, with questions and instructions. By so doing, DOE interfered with URS's right to manage its own personnel and its subcontractors and effectively usurped URS's right to determine the specific methods used to accomplish the work. DOE's behavior

contravened standard business practices, the rules of privity, and its express and implied duties under the contract.

483. URS formally raised this issue with DOE as early as December 2013, but to no avail. These issues continued for the duration of the project; for example, in August 2017, URS again had to request that DOE direct questions through the appropriate URS management chain. DOE's continual and blatant disregard for the contract and the rule of privity violated its express duty to use best efforts to cooperate with URS and facilitate URS's performance, as well as its implied duty to cooperate.

H. DOE Imposed Requirements Not Included In The Contract

484. In addition to the numerous DOE-ordered changes described above, DOE also directed URS to perform other work not included in the scope of the contract.

485. For example, DOE required URS to engage in excessive dust control efforts. Through the work package comment process from December 2015 to June 2016, and then through its supervision of URS on-site, DOE required URS to use water cannons (as opposed to misting) far more than planned, which significantly increased URS's water treatment costs and otherwise complicated URS's work on the project.

486. DOE also required URS to stop demolition work under the enclosure for each disposal into an intermodal waste container, despite the fact that URS had performed pre-demolition testing to show that the building ventilation and fans were sufficient to ensure that air would only flow into the buildings, not out of the buildings, if one door was open. As a result of DOE's requirement, URS had to stop work several times a day (for approximately half an hour each time) during a significant portion of the demolition work to move the intermodals or other containers outside of the enclosure.

487. DOE's unreasonable rejection of the science-based approaches proposed by URS impeded URS's progress, caused inefficiencies, and contravened DOE's obligation to use its best efforts to cooperate with URS and facilitate URS's performance of the work.

XIV. DOE-CAUSED DELAYS CAUSED WAGE ESCALATION

488. DOE caused multiple years of delay to the project's critical path. As a result, nearly all in-scope work was pushed several years into the future, thereby increasing URS's labor costs due to wage escalation.

489. The year-over-year rates of wage escalation experienced by URS, the largest labor provider on the project, and Bartlett Services, Inc., a subcontractor that provided the second-highest amount of labor on the project after URS, were as follows: 2.34% (2012); 1.85% (2013); 4.43% (2014); 5.87% (2015); 4.09% (2016); 1.56% (2017); and 1.46% (2018).

490. This wage escalation led to increased labor costs that URS was unable to mitigate despite its best efforts. URS is entitled to be reimbursed the portion of its unreimbursed labor costs attributable to wage escalation.

CLAIMS FOR RELIEF

COUNT I: BREACH OF CONTRACT (FAILURE TO DISCLOSE SUPERIOR KNOWLEDGE)

491. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

492. Prior to the parties signing Modification 35, DOE had knowledge of vital information, namely that: (i) EPA had determined that the SPRU site was out of NESHAP compliance, and therefore would be ineligible for waiver of the pre-construction NESHAP permitting requirement; (ii) DOE was not contesting the finding that the site was noncompliant and indeed stated that it would revise the "clearly incorrect" 2009 NESHAP annual report; and

(iii) EPA was preparing a compliance order. This information had a substantial impact on the cost of performing the contract, made the agreed-upon schedule impossible to achieve, and would be material to URS's decision whether to agree to Modification 35.

493. URS did not know prior to signing Modification 35 that EPA had determined the site was NESHAP noncompliant or that NESHAP permits would be required for the G2 and H2 enclosures and ventilation systems and PVUs. Nor did URS have reason to know these facts, which were not public and were contained only in inter-agency communications. Moreover, no contract specification put URS on notice to inquire about whether the site was in NESHAP compliance.

494. DOE knew or should have known that URS was ignorant of the site's noncompliance, including because URS informed DOE that the cost and schedule estimates URS relied on in agreeing to Modification 35 were based on the "Key Assumption[]" that "NESHAPS permitting will not be required for temporary ventilation discharges from portable HEPA filtered systems," which necessarily required the site to be in compliance. Nonetheless, DOE failed to disclose to URS that the SPRU site was out of compliance with NESHAP and that pre-construction NESHAP permits would therefore be required.

495. Every contract imposes on each party a duty of good faith and fair dealing, which includes a duty to disclose superior knowledge of vital information. Because DOE breached its duty to disclose vital information, it should bear the loss resulting from that breach. But for URS's lack of knowledge with respect to the NESHAP permitting requirement and the ongoing dispute between DOE and EPA—facts which substantially impacted the project cost and made the agreed-upon schedule impossible to achieve—URS would not have agreed to the cost-sharing provisions in Modification 35.

496. URS is entitled to damages of $314,683,818, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for all activity- and delay-related costs incurred on the project above the $145 million budget (excluding waived or reimbursed costs), or alternatively, all such costs otherwise determined to have been incurred as a result of this breach.

COUNT II: BREACH OF CONTRACT
(MISREPRESENTATION OF NESHAP PERMITTING REQUIREMENT)

497. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

498. Prior to the parties signing Modification 35, DOE had knowledge of material information, namely that: (i) EPA had determined that the SPRU site was out of NESHAP compliance, and therefore would be ineligible for waiver of the pre-construction NESHAP permitting requirement; (ii) DOE was not contesting the finding that the site was noncompliant and indeed stated that it would revise the "clearly incorrect" 2009 NESHAP annual report; and (iii) EPA was preparing a compliance order. This information had a substantial impact on the cost of performing the contract, made the agreed-upon schedule impossible to achieve, and would be material to URS's decision whether to agree to Modification 35.

499. URS did not know prior to signing Modification 35 that EPA had determined the site was NESHAP noncompliant or that NESHAP permits would be required for the G2 and H2 enclosures and ventilation systems and PVUs.

500. DOE knew that URS was entering into the contract based on its mistaken belief that the SPRU site was compliant with NESHAP and therefore would be eligible for waiver of the pre-construction permit requirement. URS informed DOE that the cost and schedule estimates that URS relied on in agreeing to Modification 35 were based on the "Key Assumption[]" that "NESHAPS permitting will not be required for temporary ventilation

discharges from portable HEPA filtered systems," which necessarily required the site to be in compliance. DOE further knew that disclosing this information to URS would remedy URS's mistaken belief that a pre-construction permit would not be required.

501. DOE did not disclose this information, despite the fact that it knew that the status of SPRU's compliance with NESHAPS was material to the parties' negotiations and to URS's willingness to enter into the cost-sharing arrangement at the agreed-upon terms and despite the fact that, during negotiations over Modification 35, the parties specifically discussed the NESHAP permits that would be required. By not disclosing critical information regarding its noncompliance, DOE failed to act in good faith and in accordance with reasonable standards of fair dealing. But for DOE's misrepresentation by omission with respect to the NESHAP permitting requirement, URS would not have agreed to the cost-sharing provision in Modification 35.

502. URS is entitled to damages of $314,683,818, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for all activity- and delay-related costs incurred on the project above the $145 million budget (excluding waived or reimbursed costs), or alternatively, all such costs otherwise determined to have been incurred as a result of this breach.

COUNT III: BREACH OF CONTRACT
(BREACH OF EXPRESS DUTIES TO USE BEST EFFORTS TO REDUCE NON-VALUE-ADDED REQUIREMENTS AND PROCESSES, TO COOPERATE, AND TO FACILITATE PERFORMANCE)

503. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

504. Section H.920 included the following "best efforts" provision that imposed duties upon DOE above and beyond the implied duties of good faith and fair dealing and to cooperate:

> The Government and Contractor recognize that reduction of cost and accelerated closure of this Task Order, in a safe and environmentally friendly manner, is a

> cooperative undertaking that requires both parties to seek innovative approaches to achieve the end objective. Streamlining process [sic], eliminating non-value-added requirements, responsiveness, timeliness, cooperation, facilitation and effective communication are critical to achieving completion. Both parties agree through the term of this contract and Task Order to use their best efforts to (i) seek the reduction of non-value added requirements and processes that impede progress and (ii) to cooperate with the other party, and facilitate the other party's performance, of their respective obligations under the Contract and Task Order.

505. Additionally, Section H.902, Government Furnished Services/Items (GFS/I) states in relevant part:

> During the performance of the contract and in recognition of the cost sharing provisions contained herein, the parties agree that mutual efficiencies and performance improvements are necessary to reduce the actual cost and/or improve the schedule for the work.

506. These provisions imposed upon DOE the express contractual duties to use its best efforts to: (i) reduce non-value-added requirements; (ii) cooperate with URS; and (iii) facilitate URS's performance.

507. DOE breached each of its express "best efforts" duties by: (i) subjecting URS to extra-contractual oversight by third-party government agencies; (ii) micromanaging URS through, among other things, repeated rounds of comments that unreasonably and unnecessarily delayed performance; (iii) imposing extra-contractual, non-valued added requirements and specifications; (iv) refusing to reasonably approve URS plans that met contractual requirements; (v) interfering with URS's management of its own personnel and subcontractors by failing to follow the chain of command; (vi) refusing to solve problems in a reasonable manner; and (vii) failing to accommodate URS's reasonable requests for work-arounds to operational challenges. DOE failed to streamline processes, eliminate non-value-added requirements, cooperate with URS, and to facilitate URS's performance, including through responsiveness, timeliness, and effective communication.

508. These actions breached DOE's express contractual duties, fundamentally impaired URS's performance, and significantly delayed and increased the cost of the project.

509. URS is entitled to damages of $235,854,420, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for all activity- and delay-related costs caused by DOE's breach of its express duties.

COUNT IV: BREACH OF CONTRACT
(BREACH OF IMPLIED DUTIES OF GOOD FAITH AND FAIR DEALING AND TO COOPERATE)

510. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

511. There is an implied duty of good faith and fair dealing in all government contracts, which includes the implied duty to cooperate. The violation of these duties amounts to a breach of contract.

512. DOE breached its implied duties of good faith and faith dealing and to cooperate by: (i) subjecting URS to extra-contractual oversight by third-party government agencies; (ii) micromanaging URS through, among other things, repeated rounds of comments that unreasonably and unnecessarily delayed performance; (iii) imposing extra-contractual, non-valued added requirements and specifications; (iv) refusing to reasonably approve URS plans that met contractual requirements; (v) interfering with URS's management of its own personnel and subcontractors by failing to follow the chain of command; (vi) refusing to solve problems in a reasonable manner; and (vii) failing to accommodate URS's reasonable requests for work-arounds to operational challenges. DOE failed to streamline processes, eliminate non-value-added requirements, and cooperate with URS, including through responsiveness, timeliness, and effective communication.

513. These actions interfered with and fundamentally impaired URS's ability to perform the contract. DOE thus deprived URS of the fruits of its bargain and thereby breached the implied duty to cooperate and the implied duty of good faith and fair dealing and significantly delayed and increased the cost of the project.

514. URS is entitled to damages of $235,854,420, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for all activity- and delay-related costs caused by DOE's breach of its implied duties.

COUNT V: BREACH OF CONTRACT
(INTERFERENCE WITH URS'S RIGHT TO DETERMINE SPECIFIC METHODS FOR ACCOMPLISHING WORK)

515. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

516. In Section C.1.1, titled "Task Order Purpose and Overview," Modification 35 provides the overall approach for work to be performed on the SPRU project:

> This Task Order Statement of Work (SOW) reflects the application of approaches and techniques that emphasize performance based results/outcomes and minimize "how to" performance descriptions. The ID/IQ Task Order Contractor (hereinafter Contractor) has the responsibility for total performance under the Task Order, including determining the specific methods for accomplishing the work.

517. DOE repeatedly interfered with URS's right to determine specific methods of performance. For example, DOE micromanaged URS's performance of hillside remediation; imposed unreasonable and extra-contractual requirements on the enclosures; refused to approve plans meeting Modification 35's performance requirements; required URS to accelerate work and perform certain work out of sequence so that DOE could meet benchmarks in a separately negotiated consent order with EPA; imposed requirements not called for in the contract, including requiring third-party verification of URS's work, changing the method and means by which URS was required to use to take samples and perform surveys to determine remaining

loose contamination, and requiring URS to participate in additional meetings; rejected URS's plan to fill the Building H2 footprint with qualified reuse material excavated from various portions of the site, despite it complying with contractual requirements; imposed excessively strict "safety" requirements on URS; and interfered with URS's management of its employees and subcontractors by failing to follow the appropriate chain of command.

518. DOE's interference constituted a breach of Section C.1.1 of Modification 35, fundamentally impaired URS's performance, and significantly delayed and increased the cost of the project.

519. URS is entitled to damages of $32,890,105, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for all activity- and delay-related costs caused by DOE's interference with URS's performance of the contract and the breach of its obligation to allow URS to determine specific methods for accomplishing work on the project.

COUNT VI: CONSTRUCTIVE CHANGE
(NESHAP PERMITTING REQUIREMENT)

520. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

521. Under Modification 35, URS was not required to obtain NESHAP pre-construction permits for the H2 and G2 enclosures and ventilation systems or the PVUs. But following the execution of Modification 35, DOE ordered URS to "provid[e] EPA preconstruction permits, potential to emit calculations, and other NESHAPS program elements as needed for EPA approval."

522. As directed by DOE, URS obtained pre-construction permits for the G2 and H2 enclosures and ventilation systems and PVUs, which caused significant activity- and delay-related costs. Further, as a result of DOE's order to obtain pre-construction NESHAP permits

for the G2 and H2 enclosures and the PVUs, URS incurred additional activity-related costs in incorporating the substantial impacts of the new NESHAP requirements into the project's baseline. Moreover, DOE unreasonably delayed in seeking EPA approval of the NESHAP permit applications, which also constituted a breach of DOE's express duties to cooperate and facilitate performance and its implied duty to cooperate, causing further delay-related costs.

523. URS notified DOE that obtaining the pre-construction permits for the enclosures and PVUs constituted a change to the contract, and that URS would be entitled to an equitable adjustment both for activity- and delay-related costs.

524. DOE agreed to an equitable adjustment and paid URS for certain costs associated with preparation of pre-construction permits, potential to emit calculations, and other NESHAP program elements for EPA approval, recognizing that Modification 35 did not require these activities. However, DOE has not reimbursed URS for the delay-related costs caused by this changed requirement, for certain unwaived contract administration costs, or for the costs of incorporating the NESHAP impacts into the project baseline.

525. Under the Changes Clause, FAR 52.243-2, Alternate II, URS is entitled to an equitable adjustment for any change that "causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, or otherwise affects any other terms and conditions of this contract." Because DOE failed to follow the procedure under the Changes Clause, DOE constructively changed the contract. DOE's conduct also constitutes a breach of its express and implied contractual duties.

526. URS is entitled to an equitable adjustment of $29,155,072, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its unreimbursed activity- and delay-related costs caused by this constructive change.

COUNT VII: DIRECTED OR CONSTRUCTIVE CHANGE (HILLSIDE INSTABILITY)

527. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

528. Although URS was not obligated to perform any hillside remediation under Modification 35's scope of work, DOE issued the following change orders pursuant to the Changes Clause, FAR 52.243-2, Alternate II, changing the work URS was obligated to perform:

- Modification 44 confirmed prior DOE orders "to 'stand-down' the operation of any heavy equipment," and to "proceed immediately with implementation of short term measures and development of an approach for long term resolution to stabilize concerns over the reliability of the Hillside sump and the integrity of the pipe that connects the overflow tank to the sump."

- Modification 50 "direct[ed] URS to proceed with the necessary foundation installation required because of the degraded bearing capacity of the soil adjacent to the western slope of the upper level site area. This direction include[d] installation of micropiles or other support structures as necessary to complete the installation of the vestibules on the North and South ends of the H2 pad enclosure, and the ventilation system."

529. In addition, DOE caused URS to incur additional costs in its work under these modifications by delaying providing direction and funding, repeatedly requiring URS to provide new work proposals and work packages, and interfering with URS's right to determine the specific methods for accomplishing the work, which also constituted a breach of DOE's express duties to reduce non-value-added requirements, cooperate, and facilitate performance, and its implied duty to cooperate.

530. URS complied with DOE's directions and remediated the hillside instability, which caused significant activity- and delay-related costs. URS notified DOE of its right to an equitable adjustment for the impacts of these directions.

531. URS is entitled to an equitable adjustment under the Changes Clause, FAR 52.243-2, Alternate II. Further, Section B.4.4 of Modification 35 expressly excludes from the cost-sharing provisions costs that are reserved in the release of claims contained in Modification 35, including "[c]osts associated with the hillside instability issue."

532. DOE has recognized that URS is entitled to be reimbursed for the costs incurred in performing this work, including by creating in Modification 48 a separate cost-reimbursable CLIN to fund the "Hurricane Irene impact at the SPRU Project site," which it stated was "specifically excluded from the cost sharing provisions of Section B.4.1 of the task order," and by partially reimbursing URS's activity- and delay-related costs resulting from hillside instability.

533. But despite DOE providing that hillside remediation work would be cost reimbursable and not subject to Modification 35's cost-sharing provisions and reimbursing URS's costs in part, DOE failed to compensate URS for the full activity- and delay-related costs of performing hillside remediation. DOE's conduct also constitutes a breach of its express and implied contractual duties.

534. URS is entitled to an equitable adjustment of $38,002,171, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its unreimbursed activity- and delay-related costs due to hillside instability.

COUNT VIII: DIRECTED OR CONSTRUCTIVE CHANGE (CHANGES TO ENCLOSURES)

535. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

536. Under Modification 35, DOE and URS agreed to limited performance specifications for the enclosures: namely, they would primarily be weather enclosures; they would have "inward airflow" or "slight negative pressure"; and the G2 enclosure would be made of fire retardant material. DOE was required under Modification 35 to review and approve the H2 and G2 enclosure designs within seven days and fourteen days, respectively.

537. Modification 35 expressly obligated DOE to use its best efforts to cooperate with URS and to facilitate URS's performance. In addition, Modification 35, like all government contracts, contains an implied duty of good faith and fair dealing and an implied duty to cooperate.

538. Despite URS submitting enclosure designs that met all of the performance specifications in Modification 35 and that were consistent with standard industry practice at similar sites, DOE refused to approve them, instead providing detailed feedback on a litany of extra-contractual concerns. DOE directed URS to provide out-of-scope technical basis and detailed design drawings, which required URS to hire an architect-engineer; directed URS to build the enclosure and ventilation systems for primary contamination control; and imposed requirements that far exceeded the performance specifications in Modification 35. Further, DOE required URS to install extensive fire protection and lighting systems in excess of what was required by Modification 35, applicable regulations, and industry custom and practice. DOE made clear that it would not approve the enclosure designs if URS did not comply with its extra-contractual demands.

539. In addition, DOE's orders to remediate hillside instability and to accelerate performance of the H2 ventilation system, including through Modifications 44, 50, and 70, created inefficiencies in URS's construction of the enclosures, causing delays to the project's critical path.

540. DOE's additional and extra-contractual requirements required URS to produce enclosure and ventilation systems that were far more robust, far more expensive, and far more time-consuming to construct than had been proposed by URS or contemplated in Modification 35. DOE's failure to approve designs meeting all of the requirements in Modification 35 also constituted a breach of its express duties to reduce non-value-added requirements, cooperate, and facilitate performance, and its implied duty to cooperate.

541. URS notified DOE that its failure to approve the enclosure design within the time period prescribed in Modification 35 was impacting the project schedule and that the extracontractual requirements constituted a change to the contract. Further, DOE recognized that URS was being required to change its approach based on its demands.

542. Under the Changes Clause, FAR 52.243-2, Alternate II, URS is entitled to an equitable adjustment for the costs of these changes. Because DOE failed to follow the procedure under the Changes Clause, DOE constructively changed the contract. DOE's conduct also constitutes a breach of its express and implied contractual duties.

543. URS is entitled to an equitable adjustment of $20,930,601, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its unreimbursed activity- and delay-related costs resulting from these changes.

COUNT IX: CONSTRUCTIVE CHANGE
(SLUDGE DISPOSAL)

544. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

545. DOE changed the contract by requiring URS to obtain NESHAP permits for the H2 and G2 enclosures and PVUs and by ordering URS to remediate hillside instability, and URS notified DOE that it was entitled to an equitable adjustment for the impacts of these changes. In addition, DOE breached its duty to disclose superior knowledge of vital information by failing to disclose the NESHAP permitting requirement and breached the contract by misrepresenting the need for a NESHAP permit. DOE also breached its express duties to reduce non-value-added requirements, cooperate, and facilitate performance; breached its implied duty to cooperate; and interfered with URS's right to determine the specific methods for accomplishing the work by delaying in seeking EPA approval of the NESHAP permit applications and in its oversight of URS's hillside remediation.

546. Due to these changes, and because DOE ordered URS not to perform any intrusive D&D work until the H2 tent enclosure and ventilation system were completed, URS was delayed by nearly two years in performing sludge processing and disposal.

547. During this delay, for which DOE was responsible, the pumps required to circulate the sludge in Tank 509E failed, allowing the sludge to settle. As a result, URS was required to install new mixing pumps, a difficult and expensive undertaking. Further, the utility and effectiveness of other elements of the sludge removal system and processes were compromised by the delay. Thus, instead of using the existing Sludge Retrieval and Solidification System, as was contemplated by Modification 35, when URS was able to resume sludge removal activities, it was more cost-effective to replace the entire system than to modify,

repair, and re-commission the existing system. Accordingly, these DOE-caused delays expanded the scope of sludge processing work URS had to perform, which caused significant activity-related costs.

548. Under the Changes Clause, FAR 52.243-2, Alternate II, URS is entitled to an equitable adjustment for any change that causes an increase in the "cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order." Because DOE failed to follow the procedure under the Changes Clause, DOE constructively changed the contract. DOE's conduct also constitutes a breach of its express and implied contractual duties.

549. URS is entitled to an equitable adjustment of $10,215,317, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity-related costs resulting from these changes.

COUNT X: CONSTRUCTIVE CHANGE
(FAILURE TO TIMELY APPROVE WATER DISPOSAL PLAN)

550. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

551. In the months leading up to the execution of Modification 35, URS and DOE extensively discussed disposal of VOC-contaminated water at the DuPont facility. The IRP, which formed the basis for negotiations over Modification 35, provided that "[e]xcavation water removed from Buildings G2 and H2 can be treated onsite for free release disposal at the Dupont facility in New Jersey." The IRP also provided that DOE "approval process and cycle times will involve a two-week turnaround for each submittal in the first month of resumed operations and a one-week turnaround thereafter." Modification 35 reflects the IRP approach by providing in

Table H.902 that, as a government-furnished service/item under the contract, "DOE will pursue the authorized release of treated water to off-site disposal."

552. URS formally submitted its Dose Estimate on February 11, 2011, after months of discussion with DOE-SPRU, and after having addressed three rounds of DOE comments. Given the extensive back-and-forth, URS's repeated pressing of DOE to approve the plan, and DOE's knowledge that URS had to use a more expensive disposal option until the plan was approved, DOE knew that any delay would cause increased costs.

553. But instead of timely approving the proposal within two weeks, DOE-SPRU failed to even submit the proposal to DOE Headquarters for approval until March 31, 2011—nearly seven weeks after URS provided it. It took another eleven days before DOE Headquarters granted its approval to the proposal, without comment. As a result of DOE's failure to timely approve URS's proposal, URS's water tanks reached capacity and URS was forced to ship the water to a more costly radiological treatment facility, causing significantly higher water treatment costs.

554. The failure of DOE-SPRU and DOE-EM to timely submit the proposal for DOE Headquarters' review and the delay in providing a government-furnished service under the contract constituted a failure to cooperate and a failure to facilitate URS's performance, and the resulting change in URS's anticipated method of water disposal was a change to the terms of Modification 35, caused by the fault of DOE.

555. Under the Changes Clause, FAR 52.243-2, Alternate II, URS is entitled to an equitable adjustment for the costs of this change. Because DOE failed to follow the procedure under the Changes Clause, DOE constructively changed the contract. DOE's conduct also constitutes a breach of its express and implied contractual duties.

556. URS is entitled to an equitable adjustment of $2,337,691, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity-related costs resulting from this change.

COUNT XI: GOVERNMENT DELAY OF WORK
(FAILURE TO TIMELY APPROVE WATER DISPOSAL PLAN)

557. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

558. In the alternative to Count X, without waiving the foregoing claim, URS alleges as follows under Count XI.

559. FAR 52.242-17, which was incorporated into the IDIQ contract, provides:

> If the performance of all or any part of the work of this contract is delayed or interrupted (1) by an act of the Contracting Officer in the administration of this contract that is not expressly or impliedly authorized by this contract, or (2) by a failure of the Contracting Officer to act within the time specified in this contract, or within a reasonable time if not specified, an adjustment (excluding profit) shall be made for any increase in the cost of performance of this contract caused by the delay or interruption and the contract shall be modified in writing accordingly.

560. URS formally submitted its Dose Estimate on February 11, 2011, after months of discussion with DOE-SPRU, and after having addressed three rounds of DOE comments.

561. Given the extensive back-and-forth, URS's repeated pressing of DOE to approve the plan, and DOE's knowledge that URS would have to use a more expensive disposal option until the plan was approved, DOE was on notice that any delay would cause increased costs.

562. Instead of timely approving the proposal within two weeks, DOE-SPRU failed to even submit the proposal to DOE Headquarters for approval until March 31, 2011—nearly seven weeks after URS provided it. And it took another eleven days before DOE Headquarters granted its approval to the proposal, without comment. As a result of DOE's failure to timely approve

URS's proposal, URS's water tanks reached capacity and URS was forced to ship the water to a more costly radiological treatment facility, causing significantly higher water treatment costs.

563. These delays were unreasonable and unjustified given that DOE had already provided multiple rounds of comments and had represented that DOE was supportive of the plan and did not anticipate any issues. In addition, the failure of DOE-SPRU and DOE-EM to timely submit the proposal for DOE Headquarters review and the unreasonable delay in providing a government-furnished service under the contract constituted a government delay of work under FAR 52.242-17. DOE's conduct also constitutes a breach of its express and implied contractual duties.

564. URS is entitled to an adjustment of $2,184,758, plus interest thereon pursuant to the Contract Disputes Act, for its activity-related costs resulting from this delay.

COUNT XII: CONSTRUCTIVE CHANGE
(ADDITIONAL BASELINES BCP 133 AND BCP 178)

565. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

566. Under Modification 35, URS was required to create only one project baseline. In addition, Modification 35 expressly obligated DOE to use its best efforts to cooperate with URS and to facilitate URS's performance and, like all government contracts, contains an implied duty of good faith and fair dealing and an implied duty to cooperate.

567. DOE directed URS to prepare three additional project baselines, each of which was a change to the contract's requirements; however, DOE only reimbursed URS for one of the three additional baselines.

568. DOE ordered URS to prepare BCP 133 to account for the impacts of the NESHAP permitting requirement. URS did not incorporate the NESHAP permit impacts in the

original Modification 35 baseline because DOE failed to disclose to URS that pre-construction NESHAP permits would be required. DOE thereby breached its duties of good faith and fair dealing and to disclose superior knowledge of vital information.

569. Second, DOE repeatedly directed URS to provide BCP 178. The need to create BCP 178 was directly caused by and the fault of DOE, as DOE unreasonably refused to resolve outstanding contractual, funding, and technical issues, which resulted in URS repeatedly having to re-sequence work. In failing to resolve these outstanding issues, which were necessary for contract performance, DOE breached its express and implied duties to use its best efforts to cooperate with URS and to facilitate URS's performance.

570. As directed, or as caused by fault of DOE, URS prepared BCP 133 and BCP 178, which caused significant activity-related costs.

571. URS notified DOE that the directions to prepare new baselines and DOE's failure to address outstanding contractual issues, which resulted in having to prepare a new baseline, were changes to Modification 35. Indeed, DOE recognized that requiring the development of any additional baselines was a change to the contract, and reimbursed URS for the cost of BCP 154, one of the three additional baselines.

572. Under the Changes Clause, FAR 52.243-2, Alternate II, URS is entitled to an equitable adjustment for the costs of these changes. Because DOE failed to follow the procedure under the Changes Clause, DOE constructively changed the contract. DOE's conduct also constitutes a breach of its express and implied contractual duties.

573. URS is entitled to an equitable adjustment of $2,758,462, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity-related costs resulting from these changes.

COUNT XIII: DIFFERING SITE CONDITION OR PRE-EXISTING CONDITION (MIXER-SETTLER IN BUILDING G2 CELL 3)

574. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

575. DOE incorporated the HSA into the original Task Order and Modification 35, and both the original Task Order and Modification 35 required URS to use the information provided in the HSA when planning its work.

576. As required under both the original Task Order and Modification 35, URS reasonably relied upon the HSA to accurately identify the extent and location of contamination within the G2 cells when calculating its cost and schedule estimates that formed the basis of Modification 35.

577. The HSA explicitly represented that the mixer-settler in Building G2 Cell 3 was removed before URS arrived on site.

578. URS reasonably relied on this representation, and because neither the HSA nor any other contract documents indicated that the mixer-settler in Building G2 Cell 3 had not been removed as the HSA stated, URS reasonably did not plan for its removal or disposal in its pre-Modification 35 cost and schedule estimates.

579. After the execution of Modification 35, URS discovered the mixer-settler in Building G2 Cell 3. The contaminated mixer-settler existed at the time of the execution of Modification 35 and differed materially from what was indicated in the HSA or was a pre-existing condition with regard to which URS did not assume the risk under Modification 35.

580. URS did not cause the unanticipated contaminated mixer-settler's presence, nor did URS's acts or omissions contribute to any liability, expense, or remediation cost. URS did

not assume the risk of the contaminated mixer-settler's presence under the terms of Modification 35.

581. As of the date of Modification 35, URS was not aware of the of the mixer-settler in Building G2 Cell 3, nor was URS aware of the HSA's inaccuracies concerning that condition. The Building G2 Cell 3 mixer-settler's presence was reasonably unforeseeable based on a reasonable inspection and in light of the information available to URS at the time of the signing of Modification 35.

582. As a result of the unanticipated contaminated mixer-settler in Building G2 Cell 3, URS performed additional work and incurred costs related to the specialized handling, disposal, and compliance requirements associated with its removal.

583. DOE bears the risk of differing site conditions and pre-existing conditions because the cost-sharing provisions of Modification 35, Section B.4.1 "do not apply to changes resulting from an approved request for equitable adjustment relating to events . . . that are reserved in the release of claims contained in Modification M035," and the release of claims provision excludes differing site conditions and pre-existing conditions. By refusing to acknowledge its responsibility for this differing site condition or pre-existing condition, DOE breached its express and implied contractual duties.

584. URS is entitled to an equitable adjustment of $446,188, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity-related costs resulting from this differing site condition or pre-existing condition.

COUNT XIV: DIFFERING SITE CONDITION OR PRE-EXISTING CONDITION (CONTAMINATED ROOF HEADER VENT ON BUILDING G2)

585. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

586. DOE incorporated the HSA into the original Task Order and Modification 35, and both the original Task Order and Modification 35 required URS to use the information provided in the document when planning its work.

587. As required under both the original Task Order and Modification 35, URS reasonably relied upon the HSA to accurately identify the extent and location of contamination when calculating its cost and schedule estimates that formed the basis of Modification 35.

588. The HSA contained an entire section on the Building G2 roof, but it did not disclose that Building G2 had a highly contaminated roof header vent system, thus indicating there was none.

589. URS reasonably relied on this indication, and because neither the HSA nor any other contract documents indicated the presence of a roof header vent on Building G2 (let alone a highly contaminated one), URS reasonably did not plan for its removal or decontamination in its pre-Modification 35 cost and schedule estimates.

590. After the execution of Modification 35, URS discovered the contaminated roof header vent. The contaminated roof header vent existed at the time of the execution of Modification 35 and differed materially from what was indicated in the HSA or was a pre-existing condition with regard to which URS did not assume the risk under Modification 35.

591. URS did not cause the unanticipated roof header vent, nor did URS's acts or omissions contribute to any liability, expense, or remediation cost. URS did not assume the risk of the roof header vent under the terms of Modification 35.

592. As of the date of Modification 35, URS was not aware of the roof header vent, nor was URS aware of the HSA's inaccuracies concerning that condition. The contaminated roof

header vent system was reasonably unforeseeable based on a reasonable inspection and in light of the information available to URS at the time of the signing of Modification 35.

593. As a result of the unanticipated roof header vent, URS had to perform additional work related to the characterization, decontamination, and removal of the contaminated piping system.

594. DOE bears the risk of differing site conditions and pre-existing conditions under Modification 35. By refusing to acknowledge its responsibility for this differing site condition or pre-existing condition, DOE breached its express and implied contractual duties.

595. URS is entitled to an equitable adjustment of $41,921, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity-related costs resulting from this differing site condition or pre-existing condition.

COUNT XV: DIFFERING SITE CONDITION OR PRE-EXISTING CONDITION (CONTAMINATED LEAD IN 319-FOOT ELEVATION PIPE TRENCH)

596. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

597. DOE incorporated the HSA into the original Task Order and Modification 35, and both the original Task Order and Modification 35 required URS to use the information provided in the document when planning its work.

598. As required under both the original Task Order and Modification 35, URS reasonably relied upon the HSA to plan for the decontamination and removal of contaminated lead when calculating its cost and schedule estimates that formed the basis of Modification 35.

599. Although the HSA indicated the presence of lead elsewhere, the section of the HSA dedicated to the Building H2 319-foot level did not disclose the existence of a pipe trench

containing contaminated lead, nor did maps and floor plans of that area, thus indicating there was none.

600. URS reasonably relied on this indication, and because neither the HSA nor any other contract documents indicated contaminated lead in a pipe trench in the Building H2 319-foot level, URS reasonably did not plan to manage, remove, or dispose of a large amount of lead from that location in its pre-Modification 35 cost and schedule estimates.

601. After the execution of Modification 35, URS discovered a pipe trench at the 319-foot level in Building H2 that contained over 100,000 pounds of unanticipated lead. This unanticipated contaminated lead existed at the time of the execution of Modification 35 and differed materially from what was indicated in the HSA or was a pre-existing condition with regard to which URS did not assume the risk under Modification 35.

602. URS did not cause the contaminated lead in the 319-foot level pipe trench, nor did URS's acts or omissions contribute to any liability, expense, or remediation cost. URS did not assume the risk of the contaminated lead in the 319-foot level pipe trench under the terms of Modification 35.

603. As of the date of Modification 35, URS was not aware of the contaminated lead in the 319-foot level pipe trench, nor was URS aware of the HSA's inaccuracies concerning that condition. The existence of the pipe trench, which was hidden from view under floor tiles, was unforeseeable based on a reasonable inspection and in light of the information available to URS at the time of Modification 35.

604. As a result of the unexpected quantities of contaminated lead in the pipe trench, URS incurred unanticipated removal, waste management, disposal, and delay costs.

605. DOE bears the risk of differing site conditions and pre-existing conditions under Modification 35. By refusing to acknowledge its responsibility for this differing site condition or pre-existing condition, DOE breached its express and implied contractual duties.

606. URS is entitled to an equitable adjustment of $1,156,863, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity- and delay-related costs resulting from this differing site condition or pre-existing condition.

COUNT XVI: DIFFERING SITE CONDITION OR PRE-EXISTING CONDITION (MERCURY CONTAMINATION)

607. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

608. DOE incorporated the HSA into the original Task Order and Modification 35, and both the original Task Order and Modification 35 required URS to use the information provided in the document when planning its work.

609. As required under both the original Task Order and Modification 35, URS reasonably relied upon the HSA to accurately identify the extent and nature of the contamination in the Building H2 tubing and piping when calculating its cost and schedule estimates that formed the basis of Modification 35.

610. The HSA indicated that piping and tubing had generally been drained and flushed of contaminants, such as mercury, and that the Building H2 tanks and lines were flushed with nitric acid and water before URS began working at the SPRU site. In addition, the HSA specifically identified the presence of mercury in certain locations, including the H2 tank vaults, but did not identify or indicate the presence of mercury elsewhere in Building H2 or the H2 Pipe Tunnel, thus indicating those conditions did not exist.

611. URS reasonably relied on this indication, and because neither the HSA nor any other contract documents indicated the presence of mercury in Building H2 or in the H2 Pipe Tunnel, URS reasonably did not plan to treat or manage extensive mercury contamination in those areas in its pre-Modification 35 cost and schedule estimates.

612. After the execution of Modification 35, URS discovered much more mercury contamination in the Building H2 piping and tunnels than was indicated in the HSA or reasonably known to or foreseeable by URS at the time it executed Modification 35. The mercury contamination encountered during contract performance existed at the time of the execution of Modification 35 and differed materially from what was indicated in the HSA or was a pre-existing condition with regard to which URS did not assume the risk under Modification 35.

613. URS did not cause the unanticipated mercury contaminant, nor did URS's acts or omissions contribute to any liability, expense, or remediation cost. URS did not assume the risk of the unexpected mercury contamination under the terms of Modification 35.

614. As of the date of Modification 35, URS was not aware of the unanticipated mercury contamination in Building H2, nor was URS aware of the HSA's inaccuracies concerning that condition. This mercury contamination was reasonably unforeseeable based on a reasonable inspection and in light of the information available to URS at the time of Modification 35.

615. This unexpected mercury caused extended work-stoppages, unanticipated cleaning costs, increased labor costs, and a suspension of all work in Building H2 until a full characterization of the building was completed.

616. DOE bears the risk of differing site conditions and pre-existing conditions under Modification 35. By refusing to acknowledge its responsibility for this differing site condition or pre-existing condition, DOE breached its express and implied contractual duties.

617. URS is entitled to an equitable adjustment of $3,735,543, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity- and delay-related costs resulting from this differing site condition or pre-existing condition.

COUNT XVII: DIFFERING SITE CONDITION OR PRE-EXISTING CONDITIONS (WATER LEAK)

618. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

619. DOE incorporated the RCRA Groundwater Report into the original Task Order and Modification 35, and both the original Task Order and Modification 35 required URS to use the information provided in the document when planning its work.

620. As required under both the original Task Order and Modification 35, URS reasonably relied upon the RCRA Groundwater Report when calculating its cost and schedule estimates that formed the basis of Modification 35.

621. The RCRA Groundwater Report indicated that a leak in the KAPL storm water piping had been "eliminate[d]" in 2005, prior to URS's work on the SPRU site.

622. URS reasonably relied on this indication, and because neither the RCRA Groundwater Report nor any other contract documents indicated the leak had not been eliminated or that water from the KAPL site was still infiltrating the SPRU site, URS reasonably did not plan to manage excess water collected from the purportedly "eliminate[d]" water leak in its pre-Modification 35 cost and schedule estimates.

623. As URS discovered in 2018, the KAPL storm water pipe had continued to leak into the Building H2 excavation area. Upon information and belief, the water leak from the KAPL storm water drain system existed at the time of the execution of Modification 35. The water leak and excess water differed materially from what was indicated in the RCRA Groundwater Report and Modification 35 or was a pre-existing condition with regard to which URS did not assume the risk under Modification 35.

624. URS did not cause the leak from the KAPL site or the excess water, nor did URS's acts or omissions contribute to any liability, expense, or remediation cost. URS did not assume the risk of the leak or excess water under the terms of Modification 35.

625. As of the date of Modification 35, URS was not aware of the KAPL leak and excess water flowing to the SPRU site, nor was URS aware of the RCRA Groundwater Report's inaccuracies concerning that condition. The water leak was reasonably unforeseeable based on a reasonable inspection and in light of the information available to URS at the time of the signing of Modification 35.

626. The leak caused, or substantially contributed to, the unexpected water volume at the SPRU site, which increased URS's water treatment costs and required URS to expend additional time and resources managing and disposing excess water volumes beyond what URS reasonably anticipated at the time of Modification 35.

627. DOE bears the risk of differing site conditions and pre-existing conditions under Modification 35. By refusing to acknowledge its responsibility for this differing site condition or pre-existing condition, DOE breached its express and implied contractual duties.

628. URS is entitled to an equitable adjustment of $2,910,647, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity-related costs resulting from this differing site condition or pre-existing condition.

COUNT XVIII: DIFFERING SITE CONDITION OR PRE-EXISTING CONDITION (EXCESS CONTAMINATION)

629. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

630. DOE incorporated the HSA into the original Task Order and Modification 35, and both the original Task Order and Modification 35 required URS to use the information provided in the document when planning its work.

631. As required under both the original Task Order and Modification 35, URS reasonably relied upon the HSA to accurately identify the extent of contamination when calculating its cost and schedule estimates that formed the basis of Modification 35.

632. URS reasonably interpreted the contract documents, including contamination data in the HSA, as indicating that contamination levels for most areas in Buildings G2 and H2 were already below—often significantly so—the threshold for which scabbling would have been required prior to the application of fixatives. Based on Modification 35 and the data in the HSA, URS reasonably believed that nearly all of contamination levels in concrete were low enough so as to not require further decontamination (including scabbling) or to require only up to one-quarter inch of scabbling before URS applied a fixative to meet Modification 35's requirements.

633. URS reasonably relied on this indication, and because neither the HSA nor any other contract documents indicated high levels of contamination requiring extensive scabbling, URS reasonably did not plan to perform extensive scabbling in its pre-Modification 35 cost and schedule estimates.

634. After performing additional characterization post-Modification 35, URS discovered that extensive scabbling and other unanticipated methods of gross decontamination were in fact required for many locations throughout Buildings H2 and G2 because the contamination in these areas was significantly higher than the contamination disclosed in the HSA. The excess contamination encountered during contract performance existed at the time of the execution of Modification 35 and differed materially from what was indicated in the HSA or was a pre-existing condition with regard to which URS did not assume the risk under Modification 35.

635. URS did not cause the unanticipated high amounts of contamination, nor did URS's acts or omissions contribute to any liability, expense, or remediation cost. URS did not assume the risk of this unanticipated contamination under the terms of Modification 35.

636. As of the date of Modification 35, URS was not aware of the unanticipated high amounts of contamination, nor was URS aware of the HSA's inaccuracies concerning that condition. The unanticipated high amounts of contamination were reasonably unforeseeable based on a reasonable inspection and in light of the information available to URS at the time of the signing of Modification 35.

637. As a result of the unanticipated contamination, URS incurred substantial delays on the overall contract work, plus unanticipated activity-related costs attributable to unexpected scabbling and other decontamination efforts.

638. DOE bears the risk of differing site conditions and pre-existing conditions under Modification 35. By refusing to acknowledge its responsibility for this differing site condition or pre-existing condition, DOE breached its express and implied contractual duties.

639. URS is entitled to an equitable adjustment of $11,583,897, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity- and delay-related costs resulting from this differing site condition or pre-existing condition.

COUNT XIX: DIFFERING SITE CONDITION OR PRE-EXISTING CONDITION (RADIATION AND CONTAMINATION IN SUMPS)

640. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

641. DOE incorporated the HSA into the original Task Order and Modification 35, and both the original Task Order and Modification 35 required URS to use the information provided in the document when planning its work.

642. As required under both the original Task Order and Modification 35, URS reasonably relied upon the HSA to accurately identify the location and extent of contamination within the SPRU facilities when calculating its cost and schedule estimates that formed the basis of Modification 35.

643. The HSA did not disclose the presence of potential transuranic waste or the other high levels of radiation and contamination in the sumps in Buildings G2 and H2, thus indicating those conditions did not exist.

644. URS reasonably relied on this indication, and because neither the HSA nor any other contract documents indicated high levels of contamination and radiation in the sumps, URS reasonably did not plan to address these conditions in its pre-Modification 35 cost and schedule estimates.

645. After the execution of Modification 35, URS discovered high levels of radiation and contamination in the sumps, including waste that could potentially have been classified as transuranic waste. The unanticipated high levels of contamination and radiation in the sumps

existed at the time of the execution of Modification 35 and differed materially from what was indicated in the HSA or was a pre-existing condition with regard to which URS did not assume the risk under Modification 35.

646. URS did not cause the high levels of radiation and contamination in the sumps, nor did URS's acts or omissions contribute to any liability, expense, or remediation cost. URS did not assume the risk of this contamination in the sumps under the terms of Modification 35.

647. As of the date of Modification 35, URS was not aware of the high levels of radiation and contamination in the sumps, nor was URS aware of the HSA's inaccuracies concerning that condition. The unanticipated sump contamination was reasonably unforeseeable based on a reasonable inspection and in light of the information available to URS at the time of the signing of Modification 35.

648. The unanticipated high levels of contamination in the sumps required extra characterization, labor, management efforts, and materials. The high levels of radiation in the sumps caused URS to have to demolish the Building H2 Pipe Tunnel and connected channels, and the vault sumps, within the enclosure, which was inefficient and caused delays. URS also had to manage unanticipated potential transuranic sump materials, which were costly to dispose of.

649. DOE bears the risk of differing site conditions and pre-existing conditions under Modification 35. By refusing to acknowledge its responsibility for this differing site condition or pre-existing condition, DOE breached its express and implied contractual duties.

650. URS is entitled to an equitable adjustment of $2,087,840, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity- and delay-related costs resulting from this differing site condition and/or pre-existing condition.

COUNT XX: BREACH OF CONTRACT
(MISREPRESENTATION IN CONTRACT DOCUMENTS)

651. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

652. DOE directed URS to use contract documents incorporated in the original Task Order and Modification 35, namely the HSA and RCRA Groundwater Report, when planning its work. DOE represented that these contract documents were sufficiently accurate and reliable to enable URS to use them when planning its work. As directed by DOE, URS reasonably relied upon the HSA and RCRA Groundwater Report to accurately identify the conditions of the SPRU project when calculating its cost and schedule estimates that formed the basis of Modification 35.

653. The HSA contained several inaccurate and misleading representations, including without limitation, the material misrepresentations concerning the following conditions:

- An unanticipated mixer-settler in Building G2 Cell 3;
- An unanticipated contaminated roof header vent in the Building G2 roof;
- Significant amounts of unexpected contaminated lead in an unanticipated pipe trench in the Building H2 319-foot level;
- Unanticipated mercury contamination in Building H2;
- Unanticipated high levels of contamination requiring extensive scabbling and other decontamination; and
- Unanticipated high level of radiation and contamination in sumps.

654. In addition, the RCRA Groundwater Report materially misrepresented that a leak in the ground water pipe system had been eliminated prior to the start of URS's work under the Task Order.

655. At the time of signing Modification 35, URS was not aware of these conditions, nor was URS aware of the HSA's or RCRA Groundwater Report's inaccuracies concerning these

conditions, and URS reasonably relied on the HSA's and the RCRA Groundwater Report's representations about these conditions. The encountered conditions existed at the time of the execution of Modification 35. Further, they were reasonably unforeseeable based on a reasonable inspection and in light of the information available to URS at the time of the signing of Modification 35.

656. DOE's misrepresentations in these contract documents constituted a breach of contract that caused URS to incur significant unanticipated activity- and delay-related costs, entitling URS to damages of $21,962,900, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act.

COUNT XXI: MUTUAL MISTAKE
(MISTAKEN UNDERSTANDING OF ACCURACY OF HSA)

657. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

658. At the time of the execution of Modification 35, URS and DOE were both mistaken regarding a material fact, namely, that the HSA accurately described the contamination of the SPRU site.

659. The parties' mutual belief was not in accord with the facts as they existed at the time Modification 35 was executed. Both parties discovered after Modification 35 was signed and URS began work under the modified contract that the HSA did not accurately describe the contamination of the SPRU site. URS repeatedly encountered contamination and conditions that were inconsistent with the information provided in the HSA.

660. The parties' mutual mistake of material fact regarding the accuracy of the HSA was central to their entering into the contract and constituted a basic assumption underlying the

contract, as reflected in the direction in the initial Task Order and Modification 35 for URS to rely on the HSA for planning and budgeting.

661. This mutual mistake had a material effect on the bargain because URS was required to remediate significantly more, and different types of, contamination than it reasonably expected. Further, URS ultimately had to proceed *without* the assurance that the HSA generally reflected the conditions it would face on the project, which was a fundamental assumption underlying Modification 35, and, as a result, URS had to approach every aspect of the site with heightened caution and without the ability to rely on the cost and schedule estimates and work plans it had developed based on the parties' mutual mistake of fact regarding the accuracy of the HSA.

662. If both parties had been aware of the extent of the inaccuracies and unreliability of the information in the HSA, they would not have agreed to the unique cost-sharing formula of Modification 35.

663. Modification 35 did not put the risk of the mistake on URS, as demonstrated by the reservation of certain claims in the release provision. Specifically, URS expressly reserved the right to assert claims for differing site conditions and pre-existing conditions, and the parties allocated the risk of these types of claims to DOE under Section B.4.4 of Modification 35.

664. As a result of this mutual mistake of material fact, Modification 35 should be reformed to a cost-reimbursable contract without a cost-sharing formula.

665. Accordingly, URS is entitled to recover unreimbursed activity- and delay-related costs of $158,952,730, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, that were incurred by URS under the contract from the point where its daily work began to be affected by this mutual mistake through the end of physical completion of the project.

COUNT XXII: DIRECTED OR CONSTRUCTIVE CHANGE (CHANGES RELATED TO THE FIFTH CONDITION OF APPROVAL AND ORISE VERIFICATION)

666. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

667. Pursuant to the fifth condition of approval, DOE imposed a change requiring URS's work to be verified by DOE's third-party contractor ORISE before beginning open-air demolition. In addition, DOE issued Modification 139 requiring URS to, among other things:

- obtain ORISE's verification of loose and fixed contamination levels before URS applied fixatives and before beginning open-air demolition;
- deliver data packages to DOE for review and comment prior to demolition; and
- support ORISE's verification efforts by, among other things, providing samples.

668. Further, pursuant to an order from DOE, URS had to prepare for and attend forty-nine PSRB and SMRT meetings that were not required under the contract.

669. In addition, DOE unilaterally changed the contract by imposing ORISE's oversight through COA 5 and associated Task Order modifications and/or by ratifying ORISE's directions and actions, by failing to cooperate to ensure consistent results between ORISE and DOE, and by refusing to permit URS to use methods of performance that were permitted under the terms of Modification 35, causing URS to: (i) perform additional surveys and sampling; and (ii) use more stringent methodological requirements than required by Modification 35 or accounted for in the associated budget or schedule. DOE breached the contract by failing to use its best efforts to cooperate to ensure consistent results between ORISE and DOE, and by refusing to permit URS to use methods of performance allowed under the terms of Modification 35. DOE's directions also interfered with URS's right to determine the specific methods for accomplishing the work and constituted a breach of DOE's express duties to use its best efforts

to reduce non-value-added requirements, cooperate, and facilitate performance, and its implied duty to cooperate.

670. As DOE was aware, the new requirements imposed by DOE through COA 5 and Modification 139 were changes to the contract, which caused URS to incur the following costs:

- Delay-related costs attributable to DOE's unreasonable delay in arranging for its contractor, ORISE to conduct, and ORISE's delay in conducting, pre-fixative verification surveys in Building G2;
- Activity- and delay-related costs attributable to URS having to redo decontamination work in the G2 cells due to leaching attributable to the new verification requirement, the greater-than-anticipated fixed contamination levels, and ORISE's delay in conducting surveys on behalf of DOE;
- Delay-related costs attributable to DOE's unreasonable delay in completing its review and comments on the Building H2 data packages;
- Activity-related costs attributable to URS's preparation of extensive data packages related to Buildings G2 and H2 demolition readiness;
- Activity-related costs attributable to URS's preparation for and attendance at the additional PSRB and SMRT meetings;
- Activity- and delay-related costs attributable to the additional surveys and samples.

671. URS is entitled to an equitable adjustment under the Changes Clause, FAR 52.243-2, Alternate II. DOE agreed in Modifications 139 and 155 to reimburse URS for activity- and delay-related costs associated with URS's support to ORISE for DOE verification of radiological conditions prior to open air demolition. However, DOE has not reimbursed URS for the delay caused by these changed requirements or for other unwaived activity-related costs. DOE unilaterally and/or constructively changed the contract. DOE's conduct also constitutes a breach of its express and implied contractual duties.

672. URS is entitled to an equitable adjustment of $9,534,908, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity- and delay-related costs resulting from these changes.

COUNT XXIII: CONSTRUCTIVE CHANGE (INEFFICIENCIES RELATED TO DEMOLITION INSIDE OF BUILDING H2 ENCLOSURE)

673. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

674. As explained in Count XXII, DOE changed the contract by requiring URS to obtain ORISE's verification that URS met certain contamination thresholds that were not included in Modification 35 before URS could proceed with open-air demolition, thereby also interfering with URS's right to determine the specific methods for accomplishing the work and breaching DOE's express duties to use its best efforts to reduce non-value-added requirements, cooperate, and facilitate performance, and its implied duty to cooperate.

675. As described in paragraph 340, the degree of unanticipated contamination and the sumps' physical orientation meant that URS could not practicably decontaminate the sumps to the new levels required by DOE.

676. Due to the changes described in Count XXII, and because DOE would not permit URS to proceed with open-air demolition without receiving ORISE's and DOE's approval, URS could not demolish the highly contaminated Building H2 sumps and associated channels outside of the enclosures.

677. Therefore, the sumps had to be demolished under the Building H2 enclosure, resulting in an inefficient and time-consuming demolition process for these areas. This also meant that URS had to demolish other areas of the Building H2 Pipe Tunnel and connected channels and the vault sumps within the enclosure to gain access to the sumps and the channels.

678. As a result of DOE's extra-contractual changes related to verification of open-air demolition, URS incurred inefficiencies and critical path delays related to demolition of the H2 sumps.

679. URS is entitled to an equitable adjustment under the Changes Clause, FAR 52.243-2, Alternate II. Because DOE failed to follow the procedure under the Changes Clause, DOE constructively changed the contract. DOE's conduct also constitutes a breach of its express and implied contractual duties.

680. URS is entitled to an equitable adjustment of $1,059,167, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its activity- and delay-related costs resulting from the inefficiencies associated with increased demolition in the Building H2 enclosure.

COUNT XXIV: GOVERNMENT DELAY OF WORK
(FAILURE TO TIMELY CONDUCT PRE-FIXATIVE VERIFICATION SURVEYS AND REVIEW AND COMMENT ON DATA PACKAGES)

681. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

682. In the alternative to Count XXII in part, URS alleges as follows under Count XXIV.

683. As explained in Count XXII, DOE's contracting officer imposed changes to Modification 35 through COA 5 and Modification 139, including the added requirement that ORISE conduct independent verification surveys before URS could apply fixatives and the requirement that DOE be permitted time to review and comment upon data packages before URS could proceed with open-air demolition.

684. DOE was on notice that any delay would cause increased costs, as acknowledged by DOE in Modifications 139 and 155, under which it agreed to compensate URS for delays.

685. Although URS was ready to apply fixatives in Building G2 by February 12, 2016, DOE ordered URS not to apply fixatives until ORISE completed its verification surveys. URS notified the contracting officer that it was ready to proceed with applying fixatives in Building

G2, but was being delayed by DOE and ORISE, yet DOE did not arrange for ORISE to do the work in a timely matter, and ORISE did not complete its verification until April 6, 2016. As a result of DOE's and ORISE's unreasonable delays, combined with DOE's insistence on additional concrete samples, as detailed in Section X.F, and unanticipated scabbling, described in IX.G, URS's critical path was delayed.

686. Further, URS submitted the Building H2 data packages on September 26, 2017, but DOE did not finish its review and confirm that the Building was ready for demolition until October 12, 2017, thereby delaying URS's critical path for demolition of Building H2.

687. DOE's unreasonable delay in conducting verification surveys and reviewing and approving URS's data packages pursuant to Modification 139 constituted a government delay of work under FAR 52.242-17. DOE's conduct also constitutes a breach of its express and implied contractual duties.

688. URS is entitled to an adjustment of $2,327,960, plus interest thereon pursuant to the Contract Disputes Act, for its delay-related costs attributable to this delay.

COUNT XXV: EQUITABLE ADJUSTMENT
(REMOVAL OF CONTAMINATED SOIL IN EXCESS OF BOUNDING CONDITION)

689. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

690. Under Modification 35, "[t]he bounding conditions set forth in various parts of Modification M035 establish conditions . . . above which an equitable adjustment may be applicable."

691. Sections C.2.2 and C.3.3 of Modification 35 included a bounding condition for contaminated soil removal comprised of 40,320 cubic feet of soil for Building G2, 6,048 cubic feet of soil under the Building G2/H2 connecting pipe tunnel, and 109,200 cubic feet of soil for

Building H2. URS was required to remove 280,800 cubic feet of contaminated soil in excess of the combined total of the bounding condition. DOE's conduct also constitutes a breach of its express and implied contractual duties.

692. URS is entitled to an equitable adjustment of $9,254,065, plus interest thereon pursuant to the Contract Disputes Act, for its unreimbursed activity- and delay-related costs resulting from this removal of soil in excess of the bounding condition.

COUNT XXVI: CONSTRUCTIVE CHANGE
(NEW BUILDING H2 SOIL BACKFILL REQUIREMENTS)

693. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

694. Modification 35 does not provide any requirements for the placement of qualified reuse material at the bottom of the excavation, stating instead that excavated reuse material "shall be used at the proper water content to permit compaction in accordance with this specification."

695. URS proposed to place the qualified reuse material above structural fill, in line with Exhibit E's directive, but DOE rejected that approach, imposing a new requirement not in the contract by conditioning URS's use of reuse material as backfill on URS placing the reuse material at or near the bottom of Building H2 excavation area. In rejecting an approach permitted by the contract, DOE interfered with URS's contractual right to determine the specific methods for performing the work and also breached its express duties to use its best efforts to reduce non-value-added requirements, cooperate and facilitate performance, and its implied duty to cooperate.

696. URS notified DOE of its objections, but DOE nonetheless required URS to comply with this extra-contractual requirement. URS complied with DOE's direction, which caused significant delay-related costs.

697. Under the Changes Clause, FAR 52.243-2, Alternate II, URS is entitled to an equitable adjustment for the costs of this change. Because DOE failed to follow the procedure under the Changes Clause, DOE constructively changed the contract. DOE's conduct also constitutes a breach of its express and implied contractual duties.

698. URS is entitled to an equitable adjustment of $347,332, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its unreimbursed delay-related costs resulting from the changed requirements for qualified reuse.

COUNT XXVII: EQUITABLE ADJUSTMENT (ESCALATION IN LABOR COSTS)

699. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

700. URS experienced multiple years of critical path delay attributable to delays caused by DOE that it would not have otherwise experienced. As a direct and foreseeable result of these delays, URS's labor costs increased, even for in-scope work. These costs flowed directly from delays DOE caused, or delays for which DOE assumed the risk, or from DOE's breach of its duty to disclose superior knowledge; breach of its express duty to use its best efforts to reduce non-value-added requirements, cooperate with URS, and facilitate URS's performance; breach of its implied duties of good faith and fair dealing and to cooperate; and its interference with URS's right to determine the specific methods for accomplishing the work.

701. URS is entitled to an equitable adjustment of $5,946,316, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for its unreimbursed labor escalation costs.

COUNT XXVIII: BREACH OF CONTRACT
(CARDINAL CHANGE)

702. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

703. DOE ordered, or caused through its own fault, URS to perform the following additional work that was outside the scope of the contract: (i) obtaining NESHAP permits for the enclosures and PVUs; (ii) remediating the instability of the SPRU hillside after Hurricane Irene; (iii) constructing an enclosure that was significantly more robust than required by the contract; (iv) replacing the Sludge Retrieval and Solidification System and mixing pumps; (v) disposing water at a different, and more expensive, site than anticipated; (vi) preparing additional project baselines; (vii) obtaining third-party verification before performing demolition, preparing data packages for DOE review, preparing for and attending forty-nine PSRB and SMRT meetings not called for by the contract, performing additional surveys and sampling, and using more stringent methodological requirements than required by the contract; (viii) demolishing sumps within the Building H2 enclosure; and (ix) placing qualified reuse material at the bottom of the excavation, rather than at the appropriate depth for its water content.

704. In addition, DOE directed URS to use contract documents attached to the original Task Order and Modification 35, namely the HSA and RCRA Groundwater Report, when planning its work. As directed by DOE, URS reasonably relied upon the HSA and RCRA Groundwater Report to accurately identify the conditions of the SPRU project when calculating its cost and schedule estimates that formed the basis of Modification 35. However, the HSA and

RCRA Groundwater Report made material misrepresentations concerning the following conditions: (i) an unanticipated mixer-settler in Building G2 Cell 3; (ii) an unanticipated contaminated roof header vent in the Building G2 roof; (iii) significant amounts of unexpected contaminated lead in an unanticipated pipe trench in the Building H2 319-foot level; (iv) unanticipated mercury contamination in Building H2; (v) unanticipated high levels of contamination requiring extensive scabbling and other decontamination; (vi) unanticipated high level of radiation and contamination in sumps; and (vii) an unanticipated water leak.

705. As a result of these changes and misrepresentations, URS was required to perform work that was beyond the scope of the contract and materially different than what the parties agreed to. Further, the cost of work and time for performance was drastically changed from what the parties anticipated and agreed to. Instead of taking eleven months, as the parties anticipated, the project ended up taking almost eight-and-one-half years to complete. Instead of the project costing $70 million for remaining work, as the parties expected, it cost approximately $430 million (approximately 615% of the target cost for remaining work), with URS expending over $300 million in unreimbursed costs.

706. These changes, collectively and individually, constituted cardinal changes to the contract. By directing and/or causing these cardinal changes, DOE breached the contract.

707. URS is entitled to damages of $314,683,818, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act, for all activity- and delay-related costs incurred on the project above the $145 million budget (excluding waived or reimbursed costs), or alternatively, all such costs otherwise determined to have been incurred as a result of this breach.

COUNT XXIX: EQUITABLE ADJUSTMENT (IMPRACTICABILITY OF PERFORMANCE)

708. URS incorporates by reference all the allegations set forth in the preceding paragraphs 1 through 490.

709. When entering into Modification 35, the parties estimated that the project could be completed in eleven months at $70 million in remaining costs.

710. When entering into the contract, URS believed that the HSA was accurate; NESHAP permits were not required for the enclosures and PVUs; and DOE would bear the costs of changes, differing site conditions, pre-existing conditions, and hillside instability. These were basic assumptions on which the contract was made.

711. These assumptions turned out to be incorrect. As a result, instead of taking eleven months, as the parties anticipated, the project ended up taking almost eight-and-one-half years to complete. Instead of the project costing $70 million for remaining work, as the parties expected, it cost approximately $430 million (approximately 615% of the target cost for remaining work), with URS expending over $300 million in unreimbursed costs.

712. URS had no reason to know that performance on the contract would cost more than six times the Target Cost for remaining work, leaving URS with over $300 million in unreimbursed costs.

713. The contract has imposed substantial unforeseen costs on URS. URS was not at fault for these costs, did not assume the risk of these costs, and continued to diligently attempt performance under the contract.

714. URS is entitled to an equitable adjustment for its unreimbursed and unwaived activity- and delay-related costs of $314,683,818, inclusive of fee, plus interest thereon pursuant to the Contract Disputes Act.

PRAYER FOR RELIEF

WHEREFORE, URS prays for the following relief:

1) On Count I, judgment against DOE awarding to URS damages for all losses resulting from DOE's breach its duty to disclose superior knowledge, of $314,683,818, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

2) On Count II, judgment against DOE awarding to URS damages for all losses resulting from DOE's breach of contract by misrepresentation, of $314,683,818, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

3) On Count III, judgment against DOE awarding to URS damages for all losses resulting from DOE's breach of its express duties to use its best efforts to reduce non-value-added requirements and processes, cooperate, and facilitate performance, of $235,854,420, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

4) On Count IV, judgment against DOE awarding to URS damages for all losses resulting from DOE's breach of its implied duties of good faith and fair dealing and to cooperate, of $235,854,420, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

5) On Count V, judgment against DOE awarding to URS damages for all losses resulting from DOE's interference with URS's right to determine specific methods for accomplishing work, of $32,890,105, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

6) On Count VI, granting an equitable adjustment of $29,155,072, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

7) On Count VII, granting an equitable adjustment of $38,002,171, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

8) On Count VIII, granting an equitable adjustment of $20,930,601, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act.

9) On Count IX, granting an equitable adjustment of $10,215,317, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

10) On Count X, granting an equitable adjustment of $2,337,691, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act.

11) On Count XI, in the alternative to Count X, granting an adjustment of $2,184,758, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act.

12) On Count XII, granting an equitable adjustment of $2,758,462, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

13) On Count XIII, granting an equitable adjustment of $446,188, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

14) On Count XIV, granting an equitable adjustment of $41,921, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

15) On Count XV, granting an equitable adjustment of $1,156,863, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

16) On Count XVI, granting an equitable adjustment of $3,735,543, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

17) On Count XVII, granting an equitable adjustment of $2,910,647, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

18) On Count XVIII, granting an equitable adjustment of $11,583,897, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

19) On Count XIX, granting an equitable adjustment of $2,087,840, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

20) On Count XX, judgment against DOE awarding to URS damages for all losses resulting from DOE's breach of contract by misrepresentation, of $21,962,900, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

21) On Count XXI, reforming Modification 35 to a cost-reimbursable contract without a cost-sharing formula, and granting an award for unreimbursed and unwaived costs incurred by URS, of $158,952,730, inclusive of fee, or such other

amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

22) On Count XXII, granting an equitable adjustment of $9,534,908, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

23) On Count XXIII, granting an equitable adjustment of $1,059,167, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

24) On Count XXIV, in the alternative in part to Count XXII, granting an adjustment of $2,327,960, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

25) On Count XXV, granting an equitable adjustment of $9,254,065, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act.

26) On Count XXVI, granting an equitable adjustment of $347,332, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act.

27) On Count XXVII, granting an equitable adjustment of $5,946,316, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act.

28) On Count XXVIII, judgment against DOE awarding to URS damages for all losses resulting from DOE's cardinal change to the contract, of $314,683,818, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act;

29) On Count XXIX, granting an equitable adjustment of $314,683,818, inclusive of fee, or such other amount as is proven at a trial in this matter, plus interest thereon pursuant to the Contract Disputes Act.

30) Accordingly, URS respectfully requests that this Court enter a judgment in Plaintiff's favor of $314,683,818, plus interest thereon pursuant to the Contract Disputes Act, and such further relief as the Court deems just and proper.

December 29, 2020

Respectfully submitted,

/s/ Charles C. Speth
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